AN ABSTRACT OF AN ADDRESS ON THE HISTORICAL RELATIONS BETWEEN

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[Profes or Clifford Allbu t commenced his address by recalling to the minds of his he rers the way in which about the year 1864 surgeons began to treat such cases as abdominal tumours, ileus and other abdominal conditions and cerebral tumour which had previously been considered prop r be treated by physicians He continued —]

It seems to me then that the present is a critical moment in the relations of medicine and surgery especially in England where the two branches of the art have been separated so radically as to appear to be 'two professions — a moment when it is our duty to contemplate the unity of medicine to forecast its development as a connected whole l of its means and ends But of medicine we cannot attain its past If as from a l eight we contemplate the story of the world not its pageants for in their splendour our eyes are dim but the gathering propagation, and ordination of its forces whence they spring and how they blend this way and that to build the ideas and institutions of men we may wonder at their creative activity or weep over the errors and the failures the spoliation and the decay which have marred or thwarted them, and if we contemplate not the whole but some part of men s sowing and men s harvest such a part as medicine the keener are our sorrow and disappointment or our joy and our hope as we admire the great ends we have gained or dwell upon the loss and suffering which have darkened the way In the development of medicine said Helmholtz 'there lies a great les on on the true principles of scientific progre s

Pray do not fear however that to fulfil the meaning of the title of this address I shall describe to you the history of medicine and the history of surgery and on this double line compare and combine my researches in the time allotted to me no such survey is possible In the seventeenth century the handicrafts of anatomy chemistry and physiology so penetrated medicine that the separate influence of surgery is less easily discernible My purpo e therefore is to pass in review certain eminent features of the history of these departments of knowledge up to the end of the sixteenth century and to compare them with a view to edification, your fear will be rather that I may tell my story with the unrightcousness of a man with a moral In his address on Morgagni at Rome in 1894 Virchow said that medicine is remarkable in its unbroken development for 25 centuri s, as we may say without irreverence from Hippocrates to Virchow himself The great pathologist s opinion however, seems to need severe qualification, if it be so the stream has more than once flowed long underground The discontinuity of medicine from Egypt to Crotona and Ionia is scarcely greater than from Galen to Avicenna, during which period in spite of a few eminent teachers in the Byzantine Empire it sank in the West at any rate into a sterile foul, and superstitious routine

[Profe sor Clifford Allbutt next dealt with Hippocrates who flourished in the fifth century B C and genius perhaps the greatest physician of all p only was he a physician but a surgeon as writings have commanded the admiration o Petrequin, Malgaigne and Littré Professor hen proceeded —]

The chief lesson of the Hippocratic period for us is that a practice as in honour med e no and surgery were then one the Greek hands in the service Archimedes and it was by century that the advance was is marvellous As we pursue the history later times we shall see the error the vanity of physicians who neglected and despised handicraft The clear eyes of the ancient Greeks that an art is not liberal or illiberal by its manipulations but by its ends As because of it ends the cleansing and solace of the lepers by St Francis or Father Damien was a service of angels so Hippocrates saw no baseness even in manipulations which obtained for his followers the name of coprophagi, where there is no overcoming there is no victory

Between Hippocrates and Galen an interval of some five centuries flourished the great anatomical and medical schools of Alexandria Our only important source however for the medicine of the Alexandrian period is Celsus who lived in the reign of Augustus In Celsus we find that the surgical and the obstetrical sides of it had made further substantial progress Besides the Hippocratic surgery we recognise means of treatment in piles fistula rodent ulcer, eczema fractures and cauterised for ozena hernias were submitted were undertaken and for the first time the larger limbs were deliberately amputated though only in extreme need and often with fatal results by secondary hemorrhage and otherwise How active surgery was from Celsus to Galen and how honourable and intimate a part of medicine we know from the scanty records of Archigenes of Apamea who also practised in Rome in the reign of Trajan Galen calls him an acute but too subtle a physician Such of his subtleties however, as are known to us—his distinction between primary and consequential symptoms for instance—are to his credit He applied the ligature in amputations and Antyllus applied the method to the cure of aneurysm which indeed, Rufus seems to have done before him Galen tells us where he got his Celtic linen thread' for the purpose—namely at a shop in the Via Sacra between the Temple of Rome and the Forum We learn also from Oribasius that Antyllus practised extensive resections of bone in the limb and even in the upper and lower jaw Galen came to Rome under Marcus Aurelius In the biological sciences this great physician stands to Harvey as in physics Archimedes stood to Galileo and to that other great physician William Gilbert Galen was the first as for many centuries he was the last to apply the experimental method to physiology He embraced the ancillary sciences he opened out new routes and he improved the old Unhappily his soaring genius took delight also in speculation and it was not the breadth of his science nor the depth of his methodical experiment but the height of his visionary conceits which imposed upon the Middle Ages Galen did not himself forget the precept of Hippocrates—to look, to touch to hear (καὶ ἰδεῖν, καὶ θιγεῖν καὶ ἀκοῦσαι) but he did not wholly subdue himself—the πεῖρα τριβική—to this toilsome conversation with troublesome facts Galen did not make any great mark on surgery his tracts on the eye are lost but so far as we know, his surgery was adopted in the man from the Alexandrians and from Soranus However, Galen successfully resected the sternum for caries exposing the heart and he excised a splintered shoulder blade moreover with all his bent to speculative reason we have no hint that he fell into the medieval abyss of regarding surgery as unfit for a scholar and gentleman[1] After Galen and Soranus medicine came to the evening of its second day to the long night before the rise of the Arabian Italian and French surgeons of the twelfth thirteenth, and fourteenth centuries

[Profe or Clifford Allbutt then showed how by the twelfth century medicine had shrunk not into sterility only but into degradation The wholesome discipline of practical surgery fell off and the tradition of Galen made for a plague of drugs which were least mischievous when merely

in the ruin h centuries scorned in lowly and

[1] Louis indeed said Mr Osborne 'I saw one of em speaking to a dim fitter a fellar I despise

and Paré, had the good fortune to escape a scholastic education; he was lucky enough, however, to enjoy the liberal education of Gesner's friendship and to listen to the fiery disputes of Paracelsus. Gifted with an independent and penetrating mind, he is as fresh and racy as Henry of Mondeville had genius enough to be in spite of the schools. Like all his compatriots he wrote in the vernacular, and for its originality and conciseness Würtz's "Practica," published in 1563, stands in a very small company. Had he known as much anatomy as Paré, his defect in which he bewails, he might have been as great a man, for his clinical advances were both new and important. He protests against the kind of examinations for practice held in some cities where candidates patter off cut-and-dried phrases like parrots, while apprentices "play upon the old fiddle the old tune continually." By setting his face against cataplasms and grease he made for progress, though neither he nor Paré attacked suppuration in principle as Theodoric and Henry had done. His chief title to fame, a fame far less ripe, of course, than that of Sydenham, but, as it seems to me, not unworthy to be remembered beside it, lies in his clinical acumen and especially in his conception of wound infections and their results. His description of diphtheria is especially remarkable.

England, if by England we mean no more than the Isles of Britain, makes no great show in mediæval or renascence surgery. Arderne was probably a far better surgeon than Gilbert or John of Gaddesden, but he is little more than a name. Nor does it do to peruse Thomas Gale (1507–1586?) after Mondeville, Guy, Paré, Würtz, or Maggi. Gale's merit lies mainly in the chapter on the "Wounds made by Gonne-shot" in the third part of his "Surgery," as he also withstood "the gross error of Jerome Brunswicke and John of Vigo, that they make the wound venomous."

With the sixteenth century my survey must end; from this time medicine entered upon a new life, upon a new surgery founded on a new anatomy and on a new physiology of the circulation of the blood and lymph. These sciences, thus renewed, not only served surgery directly but by the pervading influence of the new accuracy of observation also indirectly modified the traditional doctrines of physicians unversed in methods of research, as we observe in the objective clinical medicine of Sydenham. Our physiologists tell us that destruction is easy, construction difficult; but in the history of medical dogma this truth finds little illustration. So impatient is the speculative intellect of the yoke of inductive research, so tenacious is it of its castles in the air, that no sooner did Harvey, by revealing the mechanics of the circulation, sap the doctrines of the schools, than some physicians instantly set to work to run up the scheme of iatro-physics, others to build a system of iatro-chemics, but upon von Helmont rather than on Willis and Mayow, while Hoffmann and his school resuscitated the *strictum* and *laxum* syllogisms of the Greek methodists.

In this sketch of the past, a sketch necessarily indiscriminate but not, I trust, indiscreet, we have seen that up to the time of Avicenna medicine was one and undivided; that surgery was regarded truly not as a department of disease but as an alternative treatment of any disease which the physician could reach with his hands; that the cleavage of medicine, not by some natural and essential division but by paltering to false pride and conceit, let the blood run out of both its moieties; that certain diseases thus cut adrift, being nourished only on the wind, dried into mummy or wasted in an atrophy, and that such was medicine; while the diseases which were on the side of the roots, if they lost something of their upper sap, were fed from below, and that such was surgery. Thus the physicians who were cut off from the life-giving earth, being filled with husks and dust, became themselves stark and fantastic. Broadly speaking, until the seventeenth century pathology was a factitious schedule and medicine a farrago of receipts, most of them nauseous, many of them filthy, most of them directly mischievous, all of them indirectly mischievous as tokens of a false notion of therapy. This is the truth I have tried to get home to you; that in the truncation of medicine the physician lost not only nor chiefly a potent means of treatment, he lost thereby a method; he lost touch with things, he deprived his brains of the coöperation of the subtlest machine in the world—the human hand—a machine which does far more than manufacture, which returns its benefits on the maker with usury, blessing both him that takes and him that gives. Pure thought, for its own sake, especially in early life, when the temptation to it is strong and experience small, seems so disinterested, aloof from temptation of gain, that in the history of ide speculation and the construction of speculative systems le played but too great a part and have occupied but too m minds of eminent capacity.

In the minds of academical teachers the notion survives that the theoretical or university form and t practical or technical form of a profession or trade not only be regarded separately and taught in some tinction—which may be true—but in independence of other: nay, that the intrusion of the technical quality materialising degrades the purity or liberality of theoretical—that, indeed, if he have not to get his bread the high-minded student may do well to let the severely alone. Thus the university is prone to mak education thought without hands; the technical sc hands without thought; each fighting shy of the other. if in a liberal training the sciences must be taught whe the crafts are interpreted, economised, and developed less do the crafts, by finding ever-new problems tests for the sciences, inseminate and inform the scien as in our day physics are fertilised by the fine of such men as Helmholtz, Stokes, Rayleigh, Kelvin, and biology by Virchow, Pasteur, and Lister. the commemoration of Stokes in Westminster Abbey Kelvin honoured in him the combination of technical with intuition; and Lord Rayleigh admired in him reciprocity of accurate workmanship and instinctive ge If it be true, as I have been told, that the Universit Birmingham has a coal mine upon the premises I am r to believe that the craft of coal-getting by carrying pra into thought will fortify the web of theory. There e no doubt the contrary danger of reducing education to narrow ideas and stationary habits of the mere art. By stereotyped methods the shopmaster who does not beyond his nose may cramp the prentice and the pre becomes shopmaster in his turn. If in the feudal times, times like them in this respect, manual craft was des and the whole reason of man was driven into the attenu spray of abstract ingenuity, in other times or part society a heavy plod of manual habit so thickened "nimble spirits in the arteries" that man was little b than a beaver; on the one side matter, gross blockish; on the other speculation vacuous of all t of nature. We need the elevation, the breadth, imagination which universities create and foster; in universities we need also bridges in every p between the provinces of craft and thought. Our pu must be to obtain the blend of craft and the which on the one hand delivers us from a cre empiricism and on the other from exorbitant ratiocina That for the progress and advantage of knowledge the activities of sense and thought should find a fair ba is eminent in great examples of mankind. Moreover, apprehended in the reciprocal tensions of faith and of hypothesis and experience, of science and craft. I controversies on theory and practice, on universities technical schools, on grammar and apprenticeship, w their opposite stresses. The unison is far from being, a often we suppose, one merely of wind and helm, it is rather of wind and wing; it consists not in a mere obed of hand to mind but in some mutual implication or ge tive conjugation of them. How these two forms of im should live in each other we see in the fine arts—in the confederacy of hand and mind in Durer, Michael An Rembrandt, Velasquez, Watteau, and Reynolds. The in delicacy of educated touch is almost more incredible the compass of imagination. When they unite in m creation no shadow is too fleeting, no line too exquisit their common engagement and mutual reinforcer Michael Angelo and Leonardo da Vinci, the greatest men, perhaps, the world has seen, were as skilful to inv water engine, to anatomise a plant, or to make a s cutter's saw, as to build the dome of St. Peter abov clouds of Christendom.

Solve the problem as hereafter we may, now we can heed at least that energy shall not accumulate abou pole or the other. Our little children have a message if we would but hearken to them. Every moment the translating action into thought and thought into action. ear, and hand are incessantly on the watch and in pa gathering incessantly for the mind the forms of th which as rapidly issue again in new activities. If, a mature, we gain the power of restraint, it is not tha

cease to act that the mind shall depose the hand, but these variables shall issue in a richer and richer func-

If we forget the hand, that cunning loom which our minds, if we thrust our hands into our pockets, turn our eyes inwards, will our minds still truly grow? by virtue of the opposable thumb monkey became is no metaphor, in its measure it is sober truth For ast millennium too much thinking has been the bane of profession, we have made it a point of honour to re the hands out of which we were fashioned and in false honour to forget that the end of life is action that only by action is action bred While we are ssing to admire Bernard Palissy or Jean Goujon, medieval mason or the medieval goldsmith, we still acting as if fine arts only are fine and the anical arts base, whereby we blind ourselves to common laws of growth which know not these distinc s and bring barrenness on those who make them We a our children from the life of imaginative eyes and of ghtful fingers, instead of teaching them to rise from ple crafts to practical crafts, to scientific crafts or to lv crafts, and thus to pursue the mean of nature herself, each them the insolence that, except in sport, the mind ild drop the acquaintance of the fingers Shall we der then that in this generation bold men call English ple stupid, all stupid save those few men of genius or talent who, like Gilbert Harvey, or Darwin, were it enough to be true to eye and to hand and to breed it conceptions by their intimate contact with the mind ll we wonder that medicine fell into sterility when by t unnatural bonds surgery, her scientific arm, was behind her and her sight was turned inwards a processes to formulas? Shall we wonder that even the eighteenth century, when medicine had begun to ipy itself in the crafts of pathology and chemistry visionary after another, striding in long procession vart the barren wilderness of physic wasted his genera in squeamish evasion of the things that happen in vain pursuit of vacuous unities Yet it to high stomachs of our forefathers surgical dabblings e common and unclean there remained still some eyes ous enough and some fingers dexterous enough to carry art back to the skill of Hippocrates, and forward to the l of Lister, and by the mouths of barbers and cutters ier than of the pharisees of the colleges Medicine breathed lowly message to her children

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CASE OF SACCULATED ANEURYSM OF THE ARCH OF THE AORTA,

ATED BY THE INTRODUCTION OF SILVER WIRE AND BY THE PASSAGE OF AN ELECTROLYTIC CURRENT

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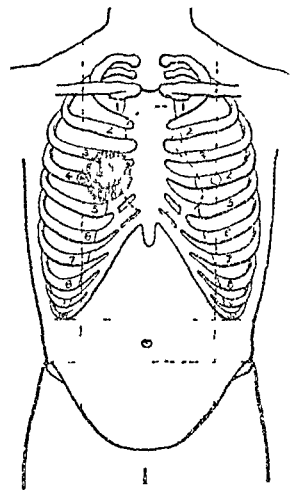
HE patient, a labourer, aged 44 years was admitted into Norfolk and Norwich Hospital on Feb 9th 1901, under care of my colleague, Dr S H Long For 18 months ad suffered from a gnawing pain in the front of the chest the right side and from time to time this pain would t through to the right scapular region It had always worse after exertion For a few weeks he had been bled by a cough with some expectoration but without reed to give up work one month

A history of syphilis could not

was pale a little cyanosed and pain in the front of the chest ser than was the right The pulse ie right wrist was much smaller than was that at the but the beats were synchronous and 64 to the minute ion was lon and the carotid arteries pulsated visibly re was a bulging of the chest wall on the right side of the num involving the third and fourth costal cartilages from r sternal joints outwards for a distance of three inches Fig 1) There were well marked expansile pul tion id rough double murmur over the tumour and a heaving impulse all over the precordium The patient improved con siderably under medical treatment and left the hospital at the end of April, 1901

In August of the same year he was re admitted having worked for one month in the interval but had been obliged again to stop work on account of increasing pain over the tumour and dyspnœa The cardiac impulse was widely

Fig 1



The shaded area shows the position of the bulging of the chest wall

diffused and its maximum point was just outside the left nipple line The bulging of the chest wall was greater, it extended downwards as far as the fifth space and was encroaching on the sternum The pulsation was more forcible There was some diminution in air entry in the upper half of the right lung He stayed in the hospital for two months

In August 1902 ten months later, the patient was again admitted by reason of the severity of the symptoms The pain travelled down the right arm to the wrist The tumour was now five inches in diameter and the point of maximum cardiac impulse was in the sixth space half an inch outside the nipple line The respirations were 30 to the minute and laboured In view of the fact that the aneurysm was increasing in size notwithstanding complete rest dieting, and the usual medicinal treatment, and that the pain was becoming unbearable in spite of frequent administrations of morphine the following operation was performed on Oct 23rd

The skin over the aneurysm was rendered anæsthetic with eucaine and a fine hollow needle, which just permitted No 9 silver wire to pass through it and which was insulated on its outer surface by a coating of shellac was introduced for a distance of three inches into the fourth right intercostal space one inch from the border of the sternum After the needle had penetrated less than one inch blood spurted through it to a height of over one foot Eight feet of silver wire were then passed slowly through the needle into the aneurysmal sac This wire had been previously wound round a towel rolled into the form of a cylinder two and a half inches in diameter and the wire and towel had then been boiled The wire was passed directly from the towel into the hollow needle, with the idea that when the wire entered the aneurysmal cavity it would resume the coiled form that it possessed when on the towel This resumption of form did actually take place when the wire thus coiled was passed experimentally through the needle before the operation The introduction of the wire took seven minutes and during this period there was some irregularity in both the rhythm and force of the pulse at the wrist but the patient made no complaint A constant

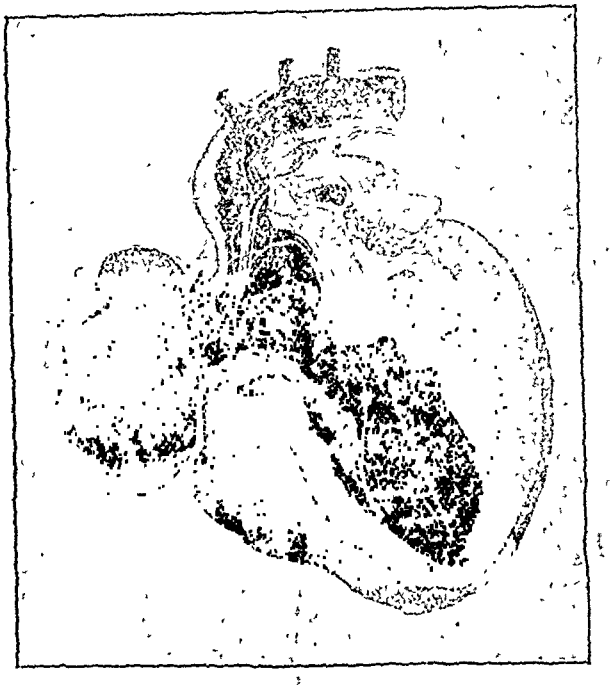
current, obtained from the main supply circulating in the hospital with the interposition of a suitable resistance, was then passed into the aneurysm for the space of 45 minutes, the end of the wire projecting through the hollow needle being connected with the positive pole and a large flat electrode applied to the thigh being used as the negative pole. For the first 15 minutes the measure of the current was five volts, 24 milliampères; for the next 20 minutes ten volts, 42 milliampères; and for the last ten minutes five volts, 28 milliampères. Ten minutes after the commencement of the electrolysis the irregularity of the pulse produced by the introduction of the wire disappeared and the beat resumed its former rhythm. The current being turned off, the end of the silver wire was pushed through the needle into the aneurysm and the needle was withdrawn. The puncture was sealed with gauze and collodion. After the needle had been withdrawn the area round the puncture became distinctly prominent, the site of the small operation forming the apex of the prominence. Some leakage from the aneurysm into the surrounding tissues had evidently occurred at this spot. Throughout the operation the patient experienced no pain and during the greater part of the time the heart's action was quite regular. About a quarter of an hour after withdrawing the needle he complained of feeling faint, turned very pale, and sweated profusely; the pulse became very feeble and irregular and the rate fell from 96 to 50 per minute. He vomited several times. The condition improved with the administration of hypodermic injections of strychnine but it was thought prudent to leave him lying on the operation table for a couple of hours before moving him to the ward. At the close of the operation there was no diminution in the pulsation in the aneurysm.

For the ensuing three weeks the pain over the aneurysm varied considerably and from time to time it was necessary to use morphine to relieve it. The swelling remained about the same and some tenderness and œdema persisted around the puncture. At the end of four weeks, however, a decided diminution in the swelling and pulsation was manifested; the pain became much less, so that the morphine was discontinued and the patient was able to get up. From this time until his discharge in February, 1903, three months later, the tumour gradually diminished in size and the pulsation was less forcible. The aneurysm felt much firmer and was evidently consolidating. The patient was up and about all day, was free from pain, and slept comfortably at night. A skiagram showed very clearly the position of the aneurysm with the wire *in situ*.

In May and June of 1903 the patient suffered from sudden attacks of dyspnœa coming on without obvious cause. He came into the hospital for a few weeks and was relieved. On August 6th he was again admitted in great respiratory distress. The respirations were 44 to the minute and he was expectorating blood-stained mucus; he was very pale and was sweating profusely; the temperature was normal. There was œdema of the lungs, of the abdominal wall, and of both legs, and the circulation was evidently failing. The aneurysm was not so prominent as it formerly had been; it felt more solid and there was less pulsation in it. The patient died on August 11th, nearly ten months from the date of his operation.

At the necropsy there were one or two pints of ascitic fluid found in the peritoneum. There was a typical "nutmeg" liver. The spleen was small and firm. The kidneys showed evidences of old emboli. The third, fourth, and fifth right costal cartilages and the adjacent portion of the sternum were bulged forwards by the pressure of the aneurysm and were thinned in places. There were no pleural adhesions but there was a pint of serum in the right pleural cavity, though there was none in the left. The lungs were very œdematous and a recent infarct two inches in diameter was found in the middle lobe of the right lung. The base of the left lung was collapsed. The trachea and bronchi contained frothy fluid and the mucous membrane was very injected. The pericard[illegible] [illegible]herent and the heart was greatly [illegible] from the first part of the arch of the aorta was a sacculated aneurysm four inches in diameter and filled with decolourised clot, in which the silver wire was coiled up in various directions. Loops of wire imbedded in dark post-mortem clot passed also along the arch of the aorta as far as the origin of the left common carotid artery and down to the bottom of the left ventricle. The end of the wire first inserted was seen in the cavity of the ventricle. The aortic valves showed very little disease but there was much atheroma of the aorta as far as its bifurcation. (See Fig. 2.)

FIG. 2.



This is a reproduction of a photograph of a coloured drawing of the dissected specimen. The arch of the aorta and the left ventricle have been laid open and the pulmonary artery has been cut across. The grooves on the surface of the aneurysm were produced by the ribs in front of it. A portion of the wall of the aneurysm has been removed and there is seen the firm partially decolourised clot filling the cavity. The coils of wire reaching from the left common carotid artery to the apex of the ventricle are very evident and other coils are buried in the clot in the aneurysm. The end of the wire first introduced can be seen about the middle of the ventricle at the margin of the dark coagulum. The other end of the wire is projecting from the surface of the aneurysm.

The publication by Dr. R. C. B. Maunsell[1] of a case of abdominal aneurysm treated by the introduction of silver wire and by the passage through the wire of an electrolytic current has induced me to record this additional case. During the introduction of the wire I believed that it was coiling up within the aneurysm and must confess that I should have been not a little anxious if I had known that it was passing along the arch of the aorta and invading the cavity of the ventricle. It is remarkable that the primary circulatory disturbance, as a result of the untoward wanderings of the wire, was so slight and that the foreign body in the heart was tolerated so readily and for so long a period. It is probable that an unnecessary length of wire for an aneurysm of this size was used and that four feet instead of eight might have been sufficient. Those cases in which the amount of wire introduced has been very large do not appear to have been the most successful. The feeble tendency possessed by a coil of silver wire when wound on a cylinder to resume its original form when unwound is a disadvantage, and on this ground the proposal by D'Arcy Power and Colt to introduce a wisp of 30 steel wires, the ends of the wires at the extremity of the wisp being soldered together, [illegible] itself.[2] As the wisp passes into the sac of the aneurysm from the fine tube through which it is introduced the free ends of the wires separate and the wisp assumes the form of a cage. Indeed, I believe it would have been difficult to find a more suitable case than the one now recorded for a trial of the method suggested by D'Arcy Power and Colt. The wires composing the wisp would have spread out within the aneurysm and there would have been no tendency in them to pass beyond the limits of the sac. In the hope of obtaining a more speedy and more extensive coagulation it would be well, however, to pass a galvanic [illegible]

[1] Brit. Med. Jour., June 18th, 1904.
[2] Transactions of the Royal Medical and Chirurgical [illegible] vol. lxxxvi.

through the wires after their insertion into the sac. It is stated that Corradi was the first to adopt this method. In 1879 he introduced into an aneurysm of the ascending aorta 17 inches of annealed wire and passed a current through it for 25 minutes. It would appear that in my case the presence of the wire in the midst of the eddying currents in the aneurysm, combined with the use of the electrolysis, was sufficient to bring about a firm coagulation [illegible] that these two factors did not [illegible] the rapid and direct blood flow [illegible]

The operation in the case which I have recorded resulted [illegible] toms of the [illegible] ten months [illegible]

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A CASE OF BANTI'S DISEASE.

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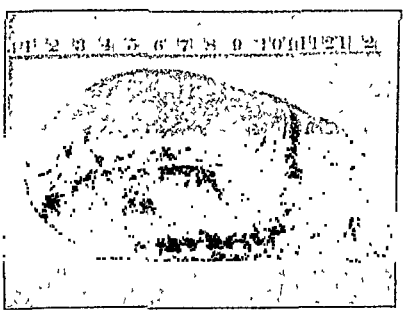
THE patient, a married woman, aged 46 years, was first seen during the evening of April 10th, 1903. She had had a fall which had brought on severe epistaxis. The hæmorrhage continued slowly for several hours and only stopped on plugging the anterior and posterior nares. A condition of extreme anæmia and a prominent abdomen, which was found to be due to an enlarged spleen, at once attracted attention. She first became aware of this splenic enlargement about a fortnight after her last confinement which took place in May, 1898. She thought that a "lump" which she could feel in her abdomen was "something that had been left behind at the confinement." This "lump" her medical man (Dr. S.'s predecessor) found to be an enlarged spleen. At this confinement there was a very large amount of liquor amnii and although the vertex presented normally and the labour was easy the child was born dead—"drowned," the midwife said. Up to this time she had been very full-blooded but she gradually grew paler and paler as the spleen increased in size. Her only previous illness was an attack of rheumatic fever when she was 25 years old. There was no history or sign of syphilis. She was not an alcoholic and had never had malaria. She said she had always had leucorrhœa. Altogether she had 11 children, eight of whom were now living. She had had no miscarriages. Her family history was good; both parents were still alive and over 70 years of age. When first seen the shrivelled skin had no red tint; its colour resembled somewhat that seen in cancerous cachexia. Pigmentation was excessive. Although there were so much wasting and muscular atrophy that she looked just "skin and bone" she had managed to help a little with the housework up to the beginning of the year. The large abdomen made her appear as though she were far advanced in pregnancy. The spleen was tender on palpation and was enormously enlarged. It bulged out the three lowest left ribs, reached almost to Poupart's ligament, and extended across into the right half of the abdomen. Its surface was smooth and even and its consistence firm. The liver was only slightly enlarged and tender. There were no ascites and no œdema of any part of the body. The lymphatic glands were not enlarged. The heart's action was feeble. Dyspnœa occurred at times. There was no palpitation. In the neck there were a hæmic murmur and a marked systolic venous pulsation. The pulse was weak, easily compressible, and varied from 100 to 110 per minute. An examination of the blood showed 2,830,000 erythrocytes, 4640 leucocytes, and hæmoglobin 36 per cent. The erythrocytes were normal in shape. She had false teeth, all her own having been extracted long ago. Her tongue was furred and her breath was very offensive. Her appetite was very poor and her digestion was weak. She lived mainly on "Force." She was always very thirsty. Constipation was the general rule but sometimes she had very offensive diarrhœa. Melæna was noticed only a few times. The respirations were slightly increased in number but the lungs were normal. The urine was scanty and always contained a plentiful supply of urates. Leucorrhœa was present. For treatment she had iron and arsenic in various forms but she was not benefited. As the disease advanced she complained greatly of pain over the spleen, but especially over the bulging ribs, and of great shortness of breath. She became very restless, had constant headaches, and slept badly. The liver increased in size, she became slightly jaundiced, and bile pigments were found in the urine. Then ascites and œdema of the legs and abdominal wall occurred. A blood examination a few days before her death showed: erythrocytes, 1,140,000; leucocytes, 3200; and hæmoglobin, 20 per cent.; poikilocytosis was also present. The restlessness increased and she finally attempted to cut her throat with a carving knife but she had not the strength to get through the skin. She died from exhaustion on Sept. 22nd, 1903. The course of the disease had been a very gradual one, the woman having lived over five years after the splenic enlargement had been detected.

A post-mortem examination was made a few hours after death, with permission to examine the thorax and abdomen only. The abdominal cavity was first tapped and 32 pints of ascitic fluid were drawn off. The viscera and tissues were very pale and the blood was like coloured serum. The spleen, which was enormously enlarged, was 14 inches long, 8 inches across the widest part, and weighed 9 pounds (Fig. 1). There were firm adhesions connecting it with

FIG 1.



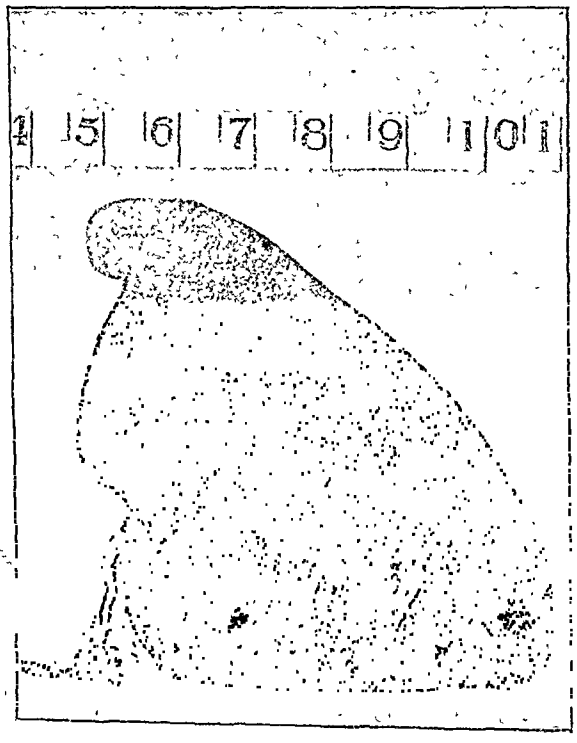
Showing the spleen in its longest diameter.

surrounding organs. The surface was smooth and even and the consistence firm. On section it was deep-red in colour and the fibrous tissue stroma was seen to be increased very much (Fig. 2). In many places there were patches of cicatricial tissue which had the appearance of infarcts. The [illegible] markedly so in parts. The liver [illegible] colour, and its surface was [illegible] were seen distinctly marked out. The stomach walls were extremely thin and very pale but showed no trace of erosions. The lymphatic glands were not enlarged and the bone marrow appeared to be normal. The other organs were apparently normal. Bacteriological examinations of the blood taken before and after death gave negative results.

Note on the histology of the liver and spleen by DR. ANDERTON.—Spleen: The capsule showed a very well-marked increase of thickness due to fibrous tissue. Here [illegible] of fibrous tissue [illegible] elongated [illegible] passive overgrowth of fibrous tissue resembling cicatricial tissue and containing few oval nuclei. There was a distinct overgrowth of fibrous tissue round the arteries. The Malpighian bodies were markedly diminished in number and size and many appeared to be replaced completely by fibrous tissue arranged in the form of round dense nodules. The lymphoid cells were fewer than normal. Very few red blood corpuscles were seen. Numerous minute granules of black pigment

were widely diffused but were more abundant in the overgrowth of fibrous tissue than elsewhere. No fat granules were found even inside the mass of fibrous tissue. There was no iron reaction. Liver: There was a very great increase of fibrous tissue throughout the entire section—as a whole it was highly cellular. The overgrowth was noticed round the portal vessel but it did not extend as a band round each lobule; it was, however, very markedly intercellular with corresponding disorganisation of the lobule—in this respect some lobules were much more affected than others but the

FIG. 2.



The spleen in section, showing increase of fibrous tissue.

change was apparent throughout. Here and there were small and ill-defined infiltrations of small round cells. The liver cells were smaller than normal; they were separated and distorted by the pericellular fibrosis. Their protoplasm had a muddy appearance and (by staining) showed a moderate degree of fatty change not confined to any special portion of the lobule. There were a large number of pigment granules. The bile ducts were normal; they appeared to be somewhat unusually abundant in places where the portal fibrosis was most marked and least cellular. The hepatic arteries were normal. Iron reaction was very slight. Spleen and liver: There was no reaction with iodine or methyl-violet. No signs of bacteria were revealed by Löffler's or Gram's stains.

THE MEDICAL TREATMENT OF DEEP-SEATED HÆMORRHAGE.

BY FRANCIS HARE, M.D.,
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IN THE LANCET of August 20th, 1904, p. 522, I contributed a paper on the above subject and referred to four cases of hæmoptysis in which the bleeding had been stopped instantaneously, or practically so, by the inhalation of amyl nitrite. Since writing that paper the following four additional cases have occurred.

CASE 1.—An *unmarried* woman, aged 26 years, a phthisical patient in the Diamantina Hospital with excavation at both apices, had suffered from many attacks of hæmoptysis, some of which were very profuse and most of which were succeeded by exaggerated temperature and indications of pneumonia. She was especially liable to bleeding from the lung when menstruation was impending. On Feb. 7th, when her menstrual period was seven days overdue, she had hæmoptysis at 5.25 A.M. to the extent of two and a half ounces; this ceased immediately on inhalation of one capsule of amyl nitrite. At 8 A.M. the bleeding recurred and she lost 11 ounces; on this occasion, though followed by immediate retardation of the bleeding, the amyl nitrite did not succeed in completely checking the loss until ten minutes had elapsed. She was then ordered $\frac{1}{100}$th of a minim of nitroglycerine every two hours. At 11 A.M. she had two ounces of hæmoptysis which ceased spontaneously. On the 29th she had two ounces of hæmoptysis which ceased under amyl nitrite in three minutes. On March 19th, at 9 A.M., she had one ounce of hæmoptysis which ceased in three minutes after an amyl nitrite capsule. On none of the above occasions was there any subsequent inflammatory reaction or extra rise of temperature.

CASES 2 AND 3.—These were cases of hæmoptysis at the Jubilee Sanatorium for Consumption at Dalby, Queensland. The first patient had two attacks, both somewhat profuse, separated by an interval of half an hour. Amyl nitrite inhalation stopped the bleeding instantaneously in both attacks. The second patient had one attack which ceased immediately on inhalation of the drug. In neither of these cases was there any subsequent additional rise of temperature. Under instructions from Dr. Andrew Stewart, the visiting physician to the institution, all hæmorrhagic cases are now provided with a capsule of amyl nitrite which they are directed to use immediately on the appearance of bleeding.

CASE 4.—Dr. D. Wield of Brisbane reports the instantaneous cessation under amyl nitrite of phthisical hæmoptysis which he had been treating ineffectually by other means for some time. The case was in the last stage, however, and the patient shortly afterwards succumbed, but there was no recurrence of the bleeding.

Adding these four cases to the four already published in THE LANCET we have the following results. Of 13 attacks of hæmoptysis (12 phthisical and one cardiac) treated by amyl nitrite inhalation, all save one ceased within three minutes, the one referred to being delayed for ten minutes.

As pointed out in my first paper, the drug acts by suddenly lowering the peripheral resistance in the systemic arterioles, thus reducing the blood pressure in the pulmonary circulation indirectly through the "fall of blood pressure in the left auricle due to diminished resistance in the aortic outflow" (Schäfer).

It is, I think, matter for surprise that in so many of the cases referred to there should have been no recurrence of the hæmoptysis. The dilative action of amyl nitrite upon the peripheral arterioles is evanescent, probably enduring for but a very few minutes. It might be anticipated, therefore, that the bleeding would return at the end of this period. Yet in only one case did bleeding recommence within two hours (half an hour) and in half the cases recurrence was absent (leaving out of account the usual continuance of slightly tinged sputa). Probably the sudden heavy fall of blood pressure which follows inhalation of the drug permits some coagulation and plugging of the leak and this is usually adequate to resist successfully the subsequent rise of blood pressure which likely enough fails in consequence of the previous hæmorrhage to attain to quite its former height.

Should it happen in the emergency of hæmoptysis that amyl nitrite were unprocurable it would be a rational procedure to immerse the patient in a hot bath. The result would be a large vaso-dilation of the cutaneous area and by so much a diminution of resistance in the aortic outflow, a fall of blood pressure in the left auricle, and a reduction, brought about passively, in the pulmonary blood pressure. At the same time the mouth and nostrils should be protected from inhalation of the hot air: indeed, the deliberate provision of cold air for inhalation would, I imagine, aid in securing hæmostasis. For by cold inhalation we might add some degree of active vaso-constriction of the pulmonary arterioles to the passive reduction of blood pressure already attained.

Elsewhere[1] I have argued that the paroxysms of migraine

[1] See a series of papers, entitled "The Mechanism of the Paroxysmal Neuroses," published in the Australasian Medical Gazette for July, August, September, and October, 1903.

and asthma are of vaso motor mechanism and that they depend essentially upon a widespread vaso constriction compensated wholly or in part by a more localised vaso dilation Conformably I have shown that in migraine the pain may be relieved (often completely though temporarily) by the simultaneous applications of heat to the general surface of the trunk and cold to the scalp and that in asthma the dyspnœa may be relieved (often completely though temporarily) by the *application of heat to the general surface of the trunk* combined with the inhalation of cold air Again in the same place I have argued that the mechanism of the physiological process of menstruation also depends upon a widespread increase of vaso constriction or of general arterial tone compensated at any rate in part by a pelvic especially a uterine vaso-dilation, and that the uterine vascular distension so attained results naturally in the menstrual loss Conformably I have shown that the loss is conspicuously reduced by hot immersion during menstruation

Now in all three cases the results—diminution of pain in migraine of dyspnœa in asthma and of hæmorrhage in menstruation—are attained similarly—namely, by a reversal of the mechanism responsible for the phenomena of the pathological processes and the physiological process respectively In all three cases such reversal results in diminution of the vascular distension at the site of the production of symptoms And it follows that the relief of hæmoptysis by a similar combination of heat and cold would be attained by a similar modification of vaso motor *mechanism*

It may be of course that the treatment of phthisical hæmoptysis by the thermal means suggested would be inexpedient on account of incidental dangers not here referred to Having no practical experience of the method I could not defend it against such a charge In any case however, the method would remain a rational one—a remark which cannot I maintain be applied to the present widely adopted plan of placing an icebag in contact with some portion of the skin covering the thorax

THE TREATMENT OF CONSTIPATION BY THE INJECTION OF OLIVE OIL

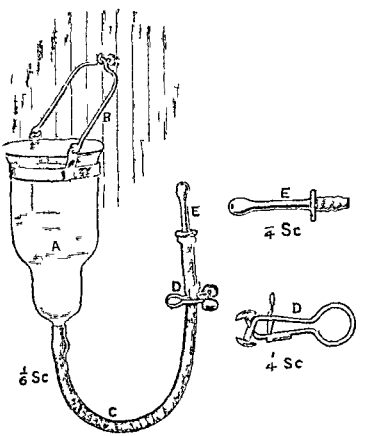
BY GEORGE HERSCHELL M D LOND

ALTHOUGH introduced into practice a considerable time ago by Kussmaul and Fleiner the *treatment of constipation* by the injection of olive oil appears to have been much neglected in this country Whilst without question most valuable in obstinate cases of constipation especially when due to spasmodic contraction of the bowel we find in the methodical use of oil injections one of the most useful procedures which we have at our command for the treatment of muco membranous colitis For not only does it to a great extent relieve the constipation which is so often present but it appears to reduce the amount of mucus in a remarkable manner In fact, in many cases the amelioration amounts practically to a cure

There are two points to be observed if we wish to be successful with this method First that we select cases which are suitable and secondly that the injections are given in a proper manner If we prescribe the injection of olive oil as a matter of routine in all the cases of constipation which come to us for treatment we shall certainly be disappointed and discredit a very valuable method For instance we can hardly expect to do any permanent good to cases which depend upon improper food or hard drinking water or are the result of pyloric stenosis or gastric myasthenia In like manner we cannot restore defective sensibility to the interior of the rectum by injections of any kind But per contra we shall invariably obtain results of a very gratifying nature in (1) cases depending upon chronic colitis, (2) constipation associated with spasm of the bowel such as we so frequently find in neurasthenia, and (3) we may use this method with advantage to secure a daily action of the bowels in atony of the intestines whilst the affection is being treated by electrical methods In these last cases the first week or two are most trying to both physician and patient as all purgatives have been abandoned and the treatment has not yet had time to restore sufficient tone to secure a daily relief In these circumstances oil injections render us invaluable aid and if properly given are usually sufficient to keep the patient comfortable

The method consists in the injection of from three to ten ounces of warm olive oil into the rectum at bedtime This is retained during the night and usually results in an evacuation after breakfast on the following day If the oil is introduced slowly at a low pressure by the force *of gravity it should not produce an immediate call to stool* and the patient should have no difficulty in retaining it for some hours The Higginson syringe is the worst possible apparatus for injecting the oil as the average patient cannot manipulate it in such a manner as to produce a gentle and equable flow the pressure under which the oil enters the body is far too high and it cannot be easily used single handed whilst the patient is in the recumbent position From this it follows that as it is usually impossible for the physician or a trained nurse to give the daily injection we must provide *the patient with an apparatus which can easily be used* unaided and which from its construction compels a proper technique

The apparatus which I have devised to meet these indications is very simple consisting of a glass funnel (A) of a large relative capacity to its height provided with a metal loop (B) by which it can be suspended at a convenient height above the bed upon which the patient lies It is fitted with



about 27 inches of rubber tube (C) of large calibre and terminates in a nozzle (D) of special construction this latter has a large bore to allow the ready passage of the oil which invariably clogs the nozzles supplied with ordinary enema apparatus and has the end of the bore well rounded so that even when roughly and unskilfully used it is impossible to damage the mucous membrane of the rectum and from its shape is self retaining For durability and cleanliness it has been constructed of aluminium The outflow of oil is controlled by a spring clip shown at (D) which is so contrived that when opened it will remain so until a catch has been released

The injection of the oil can be readily performed by the patient without assistance *The measured quantity* of oil is heated by *standing the beaker containing it* in a basin of hot water it is emptied into the funnel taking care that the clip is closed the funnel is hung on a nail driven into the wall above the bed the patient lies on his back directly under it places a pillow under his hips introduces the nozzle, presses the clip and waits until the funnel is empty For the first few times it may be as well to apply a pad of wool to the perineum to absorb any oil which may not be retained, afterwards this precaution will be superfluous It is best to commence with or six ounces and to reduce the dose daily until the amount which will produce an action of the bowel If five ounces is not sufficient it may be raised beyond this it is not advisable to go and in c

strychnine. The hairs were found to contain 8 per cent. of fat and 1 per cent. of strychnine. Liquid extracts were then prepared from these as above. The liquid extract prepared from the scraped seeds (C 1) contained 0·8 per cent. of fat and 1·16 per cent. of strychnine. Therefore the amount of alcohol (70 per cent.) required to extract three-fourths of the strychnine only removed about one-fifth of the fat. The liquid extract prepared from the hairs (C 2) contained 1·72 per cent. of fat and 0·33 per cent. of strychnine. Therefore the amount of alcohol (70 per cent.) required to extract one-third of the strychnine removed one-fourth of the fat. There was, however, a source of error in this last experiment, as, the supply of liquid extract running short, the strychnine was determined on the residue left after the removal of the fat, and strychnine not being entirely insoluble in ether there was probably some loss of the alkaloid.

We intend to continue these experiments, but publish the results obtained so far now in the hope that other workers will contribute such facts and figures as have come to their notice. We think, however, that we are justified in drawing the following conclusions: (1) that the hairs of nux vomica contain proportionately much more fat and less strychnine than do the inner portions of the seeds; (2) that the fat is more readily removed by alcohol (70 per cent.) from the hairs than from the denser portions of the seed; and (3) it follows that the hairs can be rejected with advantage before making the liquid extract.

THREE CASES OF SKIN DISEASE.

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THE three following cases of somewhat uncommon diseases of the skin occurred during the current year in patients under my charge at the Birmingham General Hospital.

CASE 1. *Acute pemphigus in a butcher's boy resulting in* [illegible].—The patient, aged 14 years, was admitted into the General Hospital on March 3rd, 1904, complaining of an eruption on his skin, sore-throat, and headache of 11 days' duration. His family and previous history were unimportant. Three weeks previously he cut his finger at his work; the wound did not heal and was poulticed by his mother. Eleven days previously, ten days after the wound to his finger, the patient felt too ill to go to work and a bullous eruption broke out, the first bleb being below the left eye. On admission his finger was practically healed but there was a small granulating surface still to be seen. The eruption covered the face and head and involved the mouth and tongue. His lips and tongue were so swollen that it was not possible to see exactly the distance to which the eruption extended to the back of the cavity. There was a similar eruption around the anus, but the epidermis had in places been rubbed off, leaving a raw ulcerated surface. The eruption on the face consisted of oval bullæ from a half to two-thirds of an inch in their longest diameter, containing sero-purulent fluid and surrounded by a pink areola; where the epidermis was detached there was a raw granulating surface. His temperature on admission was 100·4° F. and his pulse was 84. His urine contained a haze of albumin. Examination of the blood was normal. There was no eosinophilia. Cultivations of the fluid from the blebs produced only the bacillus coli. His temperature became normal on the fourth day after admission and his general condition was quite satisfactory. The rash was treated by a dusting powder containing one part of boric acid, one part of glutol, and eight parts of kaolin; but as after five days there seemed to be no change he was given in addition by the mouth five minims of liquor arsenicalis three times a day and on the 11th this was increased to ten minims. Improvement commenced at once and by March 25th he was nearly well. The albumin disappeared from his urine and he was discharged quite cured on April 5th.

During the last few years a good deal of attention has been drawn to a form of pemphigus which occurs in butchers or those handling animal tissues. Our knowledge of it is chiefly due to Pernet and Bulloch but the case under consideration differs from this classical description in certain respects: (1) the mildness of the constitutional disturbance; (2) absence of the diplococcus described by Demme and confirmed by Bleibtreu and Bulloch; and (3) the good effect of arsenic. The case is of importance as tending to modify the grave prognosis of these cases. It is evident that the infection is not always virulent.

CASE 2. *Occupation rash caused by bichromate of potassium.*—The patient, a man, aged 33 years, came to the out-patient department on Jan. 12th, 1904, complaining of a skin eruption on both forearms. He had been under my care in December, 1901, suffering from phthisis and in February, 1902, was admitted into the hospital and underwent a course of treatment by Koch's tuberculin-R. As the result he gained nine pounds in weight, there was a diminution of all symptoms, and he had been able to work up to the time of his reappearance at the hospital. There was a marked family history of consumption, one brother and two uncles having died from that disease. According to the notes taken during his former stay in hospital the apices of both lungs were involved and tubercle bacilli were present. He was treated with injections of tuberculin-R, commencing with $\frac{1}{500}$th of a milligramme and increased until 20 milligrammes were given. After his discharge he continued to attend for some time to receive injections. As these injections had been made chiefly in the forearm he suspected that the eruption of which he complained might have something to do with them. The eruption when seen consisted of round or oval elevated purplish-red patches with some slight scaliness. He was told that the eruption was probably due to something which he handled and on inquiry it was found that he was a warehouseman engaged in handling upholstery materials and on a future visit he brought to the hospital some scraps of cotton velvet which were examined by Dr. W. H. Wynn, pathologist to the hospital. Dr. Wynn found that the velvet contained potassium bichromate, alum, and a salt of iron and that the bichromate was present in sufficient quantities to account for the rash. The patient had not improved but he had not given up work and the eruption spread over his face, body, and lower extremities, so he was admitted into the General Hospital where the treatment consisted of cleanliness by means of baths and the application of boric acid ointment to the skin. Under these means he made a complete recovery and was discharged on March 2nd cured.

This is a very good example of a bichromate of potassium eruption. Successful treatment of occupation rashes depends entirely on a correct diagnosis; when that is made the rest is perfectly easy and merely involves the application of the principle *causa sublata tollitur effectus.* We are led to suspect an occupation rash when it commences upon the hands or forearms; in all such cases this possibility should be taken into account and no routine diagnosis of eczema accepted as satisfactory.

CASE 3. *Orthostatic purpura.*—The patient, a man, aged 43 years, was admitted into the General Hospital on Feb. 12th, 1904, complaining of swelling of the legs and a rash all over the lower extremities of two days' duration. There was no history in the family of tubercle or rheumatic fever. The patient said that he was well until 29 years of age when he suffered from enteric fever in Bengal; three or four years later he had intermittent malarial fever in Lower Burmah and the attacks continued until after his return home. Two years previously he had pleurisy and was ill in bed for a month. Since then he had always suffered from a cough and some few months after the attack of pleurisy he coughed up from a pint to one and a half pints of blood. During the last two years he had lost 3 stones 4 pounds; 18 months previously he began to suffer with pain in the back radiating around his thorax. On examination the patient looked pale and thin; there was marked angular curvature of the spine, beginning at the eighth dorsal vertebra and involving the following two segments. There was dulness at both apices, especially on the left side, while the right base behind was dull below the level of the seventh rib. Over the dull areas bronchial breathing and moist sounds could be heard. The swelling of the legs disappeared after his admission but both lower extremities were covered with a purpuric eruption extending up to the buttocks but most marked from the ankles to the knees. There was also a slight eruption of the same kind on the upper surface of the forearms. The liver and spleen were normal. The urine contained a trace of albumin. The blood was quite sterile. An attempt to support the spine by a Sayre's jacket failed as it made his back sore and the patient refused to allow another trial to be made. After resting in bed until the 29th the rash had entirely disappeared, so that he was allowed up for

two and a half hours, with the result that the next day the eruption had returned and was as extensive as before. A week later the same result followed a similar experiment. By March 14th the spots had gone but as the jacket had to be taken off he could not be allowed to get up. He remained in hospital until March 19th when he left at his own request. The treatment, which seemed to have no effect, consisted of at first lemon juice, half-ounce doses taken in soda-water three times a day; secondly, ten-minim doses of turpentine three times a day; and lastly, 15 grains of calcium chloride in water three times a day. The effect of the last remedy is not known as the patient had to be kept in a recumbent position owing to the state of his spine.

This is a well-marked case of orthostatic purpura, such as is commonly seen after acute rheumatism, where the eruption comes out as soon as the patient is allowed to get up and disappears when he resumes a horizontal position. It is apparently due to the state of the blood and usually passes off in a few weeks. The blood condition is not known. It might be suggested that the condition in this case was due to the lesion in the cord, the injury there setting up vaso-motor paralysis, but it seems unnecessary to adopt such a hypothesis in view of the fact that the disease often occurs in conditions where the spinal cord is quite healthy. In using the name "orthostatic purpura" it is not intended to make a fresh subdivision but merely to direct attention to this peculiarity. In 1881 it was suggested by Ceci of Prague that purpura might be caused by the action of an organism which he believed he had isolated, and which, when injected into the veins of animals, caused hæmorrhages. These statements have never been confirmed but micro-organisms have been found by one or two other observers. On the other hand, I have had all my cases examined systematically and the blood has in every case been found sterile. It is therefore fair to assume that organisms are not necessarily present and possibly when they have been found the result has been due to defective methods.

Birmingham.

UNCOMPLICATED MYOCARDITIS IN A GIRL IN HER EIGHTH YEAR ASSOCIATED WITH SIGNS OF CARDIAC FAILURE AND FOLLOWED BY SUDDEN DEATH.[1]

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A GIRL, aged seven years and 11 months, was brought to the North-Eastern Hospital for Children on Jan. 11th, 1904. Her health had been quite good until July, 1903; at that time she had an ulcerated mouth and her breath was very offensive. Since August she had been an out-patient at the Adelaide Infirmary. She went to Sunday school on Jan. 10th but fainted while there and was carried home. There was history neither of diphtheria nor of rheumatism to be obtained. She had never had scarlet fever. When I saw her she was somewhat cyanosed. Her pulse was weak at the wrist and the first cardiac sound was not good. The second at the left base was accentuated. There was no extension of dulness to the right and there was no regurgitant pulse in the vessels of the neck. A few bronchitic signs were to be heard over the lungs and the free edge of the liver was felt two fingers' breadth below the costal margin in the nipple line. The patellar reflexes could not be obtained; the soft palate acted but not very freely. Her urine was nearly solid with albumin. I thought her to be suffering from myocarditis and admitted her into hospital. On the day of admission the highest pulse-rate was 136 to the minute and the highest respiration-rate was 48 to the minute. Nothing abnormal was detected in her fundus oculi. Her temperature was 97·8° F. On the following day she was much worse. She was cyanosed; the breathing was shallow and irregular; the heart sounds were very faint and feeble and the pulse could not be felt at the wrist. She died at 3.30 P.M.

The post-mortem examination was made on the following day at 2.30 P.M. She was a well-nourished child; rigor mortis was passing off. There were four ounces of serum in the abdominal cavity and one and a half ounces in the pericardial sac. The heart weighed seven ounces. Its valves were healthy. The right side was slightly dilated; it was thin-walled, pale, and friable. The left ventricle was of normal thickness; it also was very pale and friable. Both auricles were dilated and pale. The heart was pale on its endocardial surface as well as on its pericardial aspect. All its cavities were filled with blood clots. The extreme pallor of the heart was the most striking feature. The lungs were heavy and dropsical; the right weighed nine and a half ounces and the left seven and a half ounces. The liver was pale; its free edge was on a level with the costal margin in the nipple line. The right kidney weighed three and a half ounces and the left three ounces; they were pale. The spleen and pancreas were normal; the former weighed one and a half ounces and the latter two ounces. The mucous membrane of the stomach was injected and it contained a little altered blood. The intestines were normal. The brain, which weighed 40½ ounces, was normal.

Microscopical examination.—The heart muscle was stained by Marchi's method, which showed fatty degeneration of some of the muscle fibres of both ventricles and auricles. The straight tubules of the kidney contained a considerable number of red blood corpuscles. The corpuscles were shrivelled and old, they were widely distributed, and filled the lumen of many of the straight tubules, forming casts there. In addition the two-thirds of the kidney nearest the pelvis contained an amount of scattered pigment granules. These granules were not uniformly distributed, certain areas being quite free from them, while in other parts they were very numerous and closely aggregated. They varied in colour from golden yellow to nearly black. Some were incorporated with the cells of the tubules but others lay on their surface. In places their origin from the altered blood cells could be made out.

Remarks.—In vol. iii. of the Reports of the Society for the Study of Disease in Children (pp. 170–81) and the paper which was read before the society and published in full in THE LANCET of May 30th, 1903, p. 1508, I drew attention in this country, under the heading of "Uncomplicated Myocarditis in Children," to the occasional occurrence of clinical examples of primary degeneration of the heart muscle in the young with all the symptoms of valvular disease and without endocarditis, of which the case whose history I have just narrated and from whom the specimens which I now show were taken is an excellent example. Long prior to this, in 1896, I had called attention to the condition in America.[2] In my other cases, one, post-diphtheritic, whose cardiac symptoms were much like those of the child under discussion, recovered. Another of unknown causation died and interstitial myocarditis was found post mortem. A third, of rheumatic origin, died suddenly and fatty degeneration of the heart muscle was found. A fourth, a boy, aged 12 months, showed extensive fibroid disease of the heart. The child died suddenly and general tuberculosis was found at the necropsy. The cause of the heart disease was not obvious and possibly rheumatism was responsible. There was no evidence of syphilis. In the present example the cause for the fatty degeneration of the heart is not certain, but I am inclined to the view that it is post-diphtheritic; at least, that appears to me the most likely solution.

I claim for myocarditis, including in this term cases of fatty degeneration of the muscle fibres pure and simple, a distinct clinical entity. I have used the term myocarditis with intent and not because I wish it to be understood that I consider there is anything about the condition of an inflammatory nature. For one reason it is customary at the present time in text-books on children's diseases to group such conditions under the heading myocarditis, but I have used the term chiefly because I wish the case to appear as an addendum to my recent communication on myocarditis in children. The disord
of complaints known
life; and it is a state,
recovery can and does take place, even in a severe case, as I have more than once observed. The incidence of cardiac symptoms in association with diphtheria, rheumatism, or

[1] The specimens were exhibited at the Society for the Study of Disease in Children on Feb. 19th, 1904.

[2] Two Fatal Cases of Heart Disease in which the Cardiac Muscle was alone Involved, Pediatrics, vol. ii., pp. 234–38.

sepsis facilitates the diagnosis. Myocarditis is likely to be overlooked in cases where the primary disorders which produce the complaint have passed unnoticed, as is very likely to happen and as a matter of fact frequently does happen, and when the patient first comes under observation as a case of heart disease, especially if the condition sometimes happens to be associated with cardiac bruits independent of valvular lesions. Of cases of temporary cardiac invalidism there must be many examples which escape detection. Now that attention is drawn to the condition it is hoped that it may bring forth valuable observations in the future on an important subject which needs further and more extended investigations.

Welbeck-street, W.

A CASE OF ANILINE POISONING.

By P. G. HARVEY, M.B. LOND., L.R.C.P. LOND., M.R.C.S. ENG.,

LATE HOUSE PHYSICIAN AT THE WORCESTER GENERAL INFIRMARY.

A MARRIED woman, aged 27 years, was admitted into the General Infirmary, Worcester, on May 10th, 1904, under the care of Dr. Mabyn Read, with the following history. For the last two months she had suffered from a painful swelling of the lips and gums, the pain being so severe as to prevent her taking solid food. There was no increased salivation. For the last two months she had also suffered from considerable shortness of breath and a feeling of faintness. A fortnight after the onset of these symptoms she noticed a discolouration of the gums and the inner side of the cheeks. About this time she began to suffer from sickness; vomiting occurred immediately after taking food which was returned unaltered. The nature of the food taken made no difference to the sickness and there was no abdominal pain, diarrhœa, or constipation. The patient said that her urine was very dark in colour about this time. She did not remember taking any food which upset her, nor had anyone else in her house suffered from similar symptoms. Six weeks previously she came to the infirmary as an out-patient but for family reasons would not become an in-patient; she only attended twice and since then had been obliged to keep indoors and to lie down on account of the shortness of breath. She had been attended by her private medical adviser for the last six weeks. During the last week her general condition had improved and she had not had any sickness. The past history and family history were unimportant.

On admission the patient was pale but not markedly anæmic-looking. Her complexion was somewhat sallow. The breath was offensive and the tongue was coated with a brownish fur. On examining the gums the first thing to attract attention was the pigmentation which was situated at the alveolar margin; it was dark blue in colour, being not unlike the pigmentation seen in lead poisoning but rather brighter in colour. Unlike the "line" of lead poisoning it was more like a band of pigmentation, as it extended further over the gums, in some places being fully a third of an inch deep, gradually fading into the normal colour of the gum. It was most marked on the labial aspect of the gum but was also present on the lingual aspect. It was especially noticeable around the upper left second molar which was very carious; it was also noticeable along the gum where several teeth had fallen out or had been removed some time before. On the mucous membrane of the cheeks, parallel with, and opposite to, the teeth of both the upper and lower jaw on both sides of the mouth were two bands of similar pigmentation, but the outline was much more wavy and about half an inch deep. These bands extended right round the mouth and behind on to the mucous membrane, covering the ascending ramus of the lower jaw. There was no pigmentation on the palate. All the organs were healthy. There was no sign of paralysis in the limbs. No increased pigmentation was found elsewhere on the body. The urine was of specific gravity 1018, acid, and contained no albumin.

A diagnosis of possible ptomaine poisoning or a local infection in the mouth from some unknown micro-organism was made. Lead poisoning was excluded by the absence of paralysis at the wrists, the presence of pigmentation on the cheeks, and by the nature of the pigmentation on the gums. The sickness did not seem like the ordinary lead colic. Addison's disease suggested itself on account of the gastric symptoms from which the patient suffered, but the pigmentation was unlike that found in this disease and did not exist elsewhere. The treatment was purely symptomatic, a bismuth mixture and an antiseptic mouth wash which were used when she was an out-patient were continued, fluid food only being given. A culture from the mouth was not made at the time. One made later showed staphylococci and streptococci only.

On May 16th Dr. G. W. Crowe saw the patient and at once suggested aniline poisoning as a possible cause for her symptoms. On following up this idea it was found that she was in the habit of using an indelible pencil for writing, which she moistened in her mouth from time to time. She had used this class of pencil for years and did not think that she had used it more than usual lately. She promised to obtain the pencil but failed to do so. A similar pencil tested afterwards gave most of the tests for aniline. The urine was examined with negative results. The patient was discharged on May 28th, the general symptoms having subsided and the pigmentation having steadily decreased, especially on the cheeks.

This case seems remarkable on account of the length of time during which the habit of sucking the pencil had existed without previously causing any symptoms. Dixon Mann[1] mentions cases of aniline poisoning which resemble the above case fairly closely. When a large quantity was swallowed at one time vomiting, dizziness going on to coma, dyspnœa, and intense blueness of the surface were prominent symptoms. Milder cases suffered from discolouration of the lips and face without dyspnœa and vomiting. He also quotes Rayner[2] who relates a series of cases which seem very similar. The aniline in these cases was absorbed from napkins which were marked with a stamp the ink of which was aniline. Locally the buttocks and vulva were stained. The children, who were newly born, had blue discolouration of the gums, lips, and palate; the skin was dusky but no general symptoms were noted.

I am greatly indebted to Dr. Read for permission to publish, and also for kindly revising an account of, this case.

Penzance.

CERVICAL FIBROID OF THE UTERUS OBSTRUCTING LABOUR; CÆSAREAN SECTION; SUPRAVAGINAL HYSTERECTOMY.

By H. T. D. ACLAND, F.R.C.S. ENG.,

HONORARY SURGEON, CHRISTCHURCH HOSPITAL, NEW ZEALAND.

THE following case from its comparative rarity seems to me worthy of publication. The patient, aged 39 years, who had been married seven years, had reached full term of her third pregnancy. The first confinement occurred five years ago; the labour lasted seven hours and forceps were used. The second confinement took place two years and eight months previously; the labour lasted 12 hours and the child was born before the arrival of the medical attendant. After the second confinement until the third pregnancy commenced menstruation was regular and there was no increase in the amount lost at each period. In the early months of the third pregnancy there were no abnormal symptoms, but during the last six weeks she suffered discomfort and pain of a bearing-down character, so that she often thought labour was commencing. There was increased frequency of micturition and diarrhœa was present almost throughout the whole pregnancy.

Labour commenced on May 11th, 1904, at 2 A.M.; the pains were strong and regular throughout the day. Between 7 and 8 P.M. she was seen by Dr. J. Cooke of Lincoln who found on examination a large fibroid blocking the pelvis and immediately sent her to the Christchurch Hospital for operation. She was driven a distance of 12 miles in a dog-cart, kneeling on the floor of the vehicle with her arms resting on the seat, and arrived at the hospital at about 11 P.M.

On examination the abdomen presented the usual appearance seen at the end of pregnancy; the uterine pains were so

[1] Forensic Medicine and Toxicology, edition 1898, p. 561.
[2] Brit. Med. Jour., 1886.

strong and followed one another so rapidly that but little could be made out by external palpation. Per vaginam a solid rounded mass was felt pressing down the posterior vaginal wall and occupying the whole of the posterior three-fourths of the pelvis. High up behind the pelvis the os, *dilated to admit four fingers, was felt. The anterior lip was* soft and œdematous; the posterior lip was not well defined but stretched out over the tumour. The membranes were unruptured and a foot could be felt presenting. Per rectum the posterior suface of the tumour was felt closely fitting the hollow of the sacrum. It was quite immoveable.

At 12.30 A.M. on May 12th, labour having been in progress for 20½ hours, Cæsarean section was performed. After delivery of the child the uterus was tilted through the abdominal incision and the placenta and membranes were removed. The bleeding was quite inconsiderable. The tumour was now ascertained to be a large fibroid springing from the posterior wall of the cervical canal and burrowing down into Douglas's pouch. It was decided to remove the uterus and fibroid. This . . . . . ovarian arteries, dividing . . . . . peritoneal flaps from the . . . . . from the posterior surface of the fibroid behind. The tumour was easily shelled out from Douglas's pouch and with the uterus was brought out of the abdominal wound. The uterine arteries were then ligatured and the cervical canal was cut across near its lower end. The cervix was sutured with a few interrupted silk stitches, dropped back, and the peritoneum sutured over in the usual manner. The abdominal wound was closed in layers. The patient at the end of the operation, which lasted one hour and five minutes, was in good condition. The child weighed nine pounds and throve well. The mother made an uneventful recovery and left the hospital at the end of three and a half weeks.

The noticeable features in the operation were those which Amand Routh called attention to in his paper read before the British Medical Association in July, 1903—namely, the ease with which the peritoneum stripped up and with which the uterus and fibroid were drawn out of the abdomen; also the readiness with which the arteries, on account of their large size, were recognised and ligatured. There was some difficulty in deciding where exactly to divide the cervix, as owing to its canalisation it was not very clear where the cervix joined the vagina.

The parts removed consist of the uterus, both tubes and *ovaries, with a fibroid springing from the posterior wall of the* cervical canal and lower part of the body of the uterus. In the anterior wall of the uterus was an incision through which the child was extracted and below there was the dilated cervical canal cut across. The fibroid was ovoid in shape, the larger pole being above; it sprang from the lower part of the posterior wall of the body of the uterus and from the posterior wall of the cervical canal and projected downwards below the level of the external os for about two inches. It measured eight inches in length and five inches in breadth. The circumference at the centre was 11½ inches, two inches above this it was 12½ inches, and two inches below the centre it was nine and a half inches. The whole length of the uterus and fibroid was 14 inches.

Christchurch, New Zealand.

LITHOTRITY IN EGYPT FOR LARGE STONES.

BY FRANK MILTON, M.R.C.S. ENG., L.R.C.P. LOND.,
PROFESSOR OF CLINICAL SURGERY, GOVERNMENT SCHOOL OF MEDICINE, CAIRO.

THE choice of operation in cases of small stones is not of great moment, for any form of operation should be successful, but when large stones have to be dealt with the operation decided upon will certainly affect the result. The fact that lithotrity, by which throughout this paper urethral lithotrity is meant, offers distinct advantages over other forms of treatment in all ordinary cases by reason of the rapidity of cure and the absence of after-suffering is firmly established, but it is not equally clear to all surgeons that lithotrity is the best form of operation in cases of stones of large size—that is, of 50 grammes weight and over. Among the English surgeons in Cairo the doctrine is held that in all cases of stone in which the urethra is capable of taking a lithotrite of the pattern used by them lithotrity should be done through the urethra. The statistics which I am able to offer are taken from the practice of Mr. H. M. N. *Milton and myself; they concern 159 cases of* stones of 50 grammes and over, of which Mr. Milton *contributes 113 and I 46*, and they are consecutive cases and altogether unselected. All the patients were over 15 years of age with the exception of nine, of whom one 13 years of age was cured by a lithotrity, six between 12 and 14 years of age were cured by perineal lithotrity, and two between ten and 14 years of age were cured by suprapubic lithotomy. The cases treated by cutting operations were so treated either because that method was thought to be best for those particular cases at the time or because there was some mechanical difficulty other than the mere size of the stone preventing the grasping of the calculus with a lithotrite. The largest of all Mr. Milton's stones, which weighed 995 *grammes, and for which laparotomy was successfully* done, is not included. The largest stones treated under *each heading were: by lithotrity, 452 grammes; by supra*pubic lithotomy, 392 grammes; by perineal lithotrity, 387 grammes; and by left lateral lithotomy, 90 grammes. The total results obtained were as follows:—Lithotrity: cases, 84; deaths, five; mortality, 5·9 per cent. Perineal lithotrity: cases, 47; deaths, seven; mortality, 14·9 per cent. Suprapubic lithotomy: cases, 22; deaths, eight; mortality, 36·3 per cent. Left lateral lithotomy: cases, six; deaths, nil; mortality, nil. The comparative mortality of the two forms of operation, even including the lateral lithotomies which were all done for comparatively small stones, the largest only weighing 90 grammes, was, for lithotrity, 5·9 per cent. and for the cutting operations 18·9 per cent., showing a mortality in favour of crushing without a wound of 13 per cent.

Since the subject of a large stone must, from the nature of the disease, be in a certain percentage of cases the subject also of destructive disease of the kidneys, it follows that in *all forms of operations undertaken for these cases there must* be a certain proportion of, as it were, accidental mortality—that is to say, cases which will die after any form of treatment. This being so and the gravity of the disease itself being taken into consideration the mortality of 5·9 per cent. will *compare favourably* with that normal to any operation performed for disease of like gravity. Lithotrity is essen*tially an operation which needs practice* for its efficient performance and the results of which are directly in proportion to the experience of the operator, and the dexterity necessary for the attack of large stones can only be obtained by constant *practice on stones of ordinary* size and weight. "Perineal lithotrity," as spoken of in this paper, is the operation described by Reginald Harrison, where the prostate is *incised and the stone is broken up* sufficiently to allow of its removal by forceps, and not the operation described by Keith where a small incision is made into the *membranous urethra and the* stone is crushed by a larger lithotrite than could be passed down the unwounded urethra and then washed out in the ordinary way. This last operation is hardly ever performed here, but the operation combining a perineal lithotomy with crushing of the stone with a special instrument is fairly common and after lithotrity gives the best results for large stones, but it has the drawback common to all cutting operations that in cases where the bladders are much disorganised by bilharzia the bladder symptoms are increased and owing to the bad nutrition of the part the wound is very long in healing and in some cases never heals at all, the . . . . . wound in . . . . . There is . . . . . y very soft and that they occur in conjunction with chyluria; both these ideas are wrong, for although cases of soft phosphatic stones do occur in Egypt, as elsewhere, they are by no means abnormally frequent and the majority of stones will compare favourably, from the point of view of hardness, with those found in other countries; and also chyluria is a rare disease in this country and personally I have never met with a case complicated with stone.

The instruments used at Kasr-el-Aini are of a pattern devised by Mr. Milton. The lithotrites differ from the ordinary pattern in the large diameter of the rotatory part of the handles and in the annular form of the slides, tending to give increased power and delicacy in crushing and to diminish fatigue. The evacuating syringe is of the

simplest possible construction and the straight catheters are those generally used. The lithoclast is also Mr. Milton's pattern and is to be used through a comparatively large wound.

Cairo.

SOME OBSERVATIONS POINTING TO AN INTRACORPUSCULAR STAGE OF DEVELOPMENT IN THE TRYPANOSOME.

BY E. J. MOORE, F.R.C.S. IREL.,
DISTRICT MEDICAL OFFICER, ASABA, SOUTHERN NIGERIA, WEST AFRICA.

ON making daily examinations of the blood from the peripheral circulation of cattle suffering from a severe trypanosoma infection I noticed free in the plasma numerous exceedingly minute spherical coccus-like bodies of a highly refractive nature. These bodies soon after their first appearance united in pairs and then became exceedingly active, the movements consisting principally of rapid flexion and extension of the combined pair and a slight absolute movement through the field of observation. 24 hours after their first appearance these bodies were seen to be no longer free but attached in large numbers along the periphery of the red corpuscles, slightly indenting their substance. On the third day the bodies, now almost completely intracorpuscular, had become very much larger and elongated to a peg-shape, the head lying in the body of the corpuscle while the shank projected from its surface, being evidently inclosed in a prolongation of the stroma which formed a sheath from which the point of the intracorpuscular body was sometimes protruded like the sting of an insect and sometimes suddenly retracted, the whole body travelling inwards through the substance of the corpuscle and impinging on its opposite wall. The projecting portions of these peg-shaped bodies, sometimes curved and sometimes straight, were in constant motion, the tips were blunt and evidently from their behaviour were provided with flagella, which, however, I was unable to perceive. In addition to these elongated bodies others of a spherical form were present moving actively inside the corpuscles and occasionally pushing the corpuscular substance outwards, elongating and appearing as projections from the surface; the condition was so general that each corpuscle contained from two to six of the bodies which gradually increased in size and gave to each individual disc an independent motion of a very interesting nature. The corpuscle could sometimes be seen to communicate a motion to its neighbour, with which it was not actually in contact, a phenomenon due, in my opinion, to the presence of flagella in the tips of the projecting peg-shaped bodies; at other times these bodies gave one the idea of trying to pull themselves free of the corpuscles and by their efforts individual corpuscles were pulled out of shape, sometimes appearing as ovals with a prolongation from each extremity from which protruded the tip of a peg-shaped body; at other times, when three of these bodies were present, the shape assumed was roughly triangular and constantly varied according to the strength of pull exerted by the contained peg-shaped bodies.

On the eighth day after the appearance of the free coccoid bodies in the plasma the intracorpuscular bodies in some cases separated to one side of the corpuscle, the hæmoglobin being collected to the other side; they then became snail-shaped and a marked constriction appeared between them and the bodies of the corpuscles, presenting the appearance of being budded off. After remaining for about 24 hours in this condition I have observed them to become detached and float free with a sluggish movement in the plasma, being then in shape, appearance and size remarkably like small trypanosomes but without sheath or spot. On the tenth day the blood of the animals, hitherto free from trypanosomes, was found to contain them in immense numbers and two days later the coccoid bodies which had been absent since the stage in which I have described them as invading the corpuscles again began to swarm in the plasma, and the cycle, which thus was completed in 10 days, recommenced.

On the appearance of the trypanosomes I made prolonged examination of the blood with the view to discover their mode of reproduction and was unable to find in any case evidence of longitudinal fission. I noticed, however, that the parasites were very often found in pairs and observed them travelling across the slide towards one another; the parasites also exhibited motions of a very peculiar nature, the body substance becoming repeatedly retracted to either extremity and sometimes at the same time to both extremities, forming one or two spheres with a bright spot in the centre. These movements were sometimes followed by the death of the parasite and it is a matter of interest that in dying the animal invariably assumed a globular shape; this probably accounts for the difficulty in finding trypanosomes post mortem even when they have caused the death of an animal. (That trypanosomes do not alter their shape in dried smears is due, I believe, to the fact that the process of drying fixes the animal in position before it has time to assume the circular shape.) In the cases of parasites which survived longer there was often a definite series of movements of the posterior portions of the body substance to the extremity of the tail, the tail-spot being jerked along with the protoplasm, which then gradually returned to its original position, the tail-spot remaining stationary against the side of the sheath while the protoplasm rippled forward past it; the result of the movements was that the tail-spot became slowly pushed towards the hinder extremity and though I could not convince myself that I ever saw the spot being actually extruded all the movements of the parasite seemed to be purposive and directed towards getting rid of the tail-spot which seemed to constitute a source of irritation.

There is one further point—namely, that the time of the appearance of the coccoid bodies in the plasma coincided with those movements of the tail-spot and that, when under the conditions described above, a free coccoid body and a trypanosoma appeared in the same field the tail-spot and coccoid body showed such a remarkable similarity that their optical characteristics were in fact identical.

From the description by Major C. Donovan, I.M.S., which I have read in THE LANCET of Sept. 10th, p. 744, of the piroplasmata Donovani I am inclined to think that the intracorpuscular peg-shaped bodies are of a similar nature to those which he describes. From my observations it will thus be seen that minute spherical bodies will sometimes be found periodically swarming in the plasma in animals infected with trypanosomes; that these bodies unite in pairs, appearing as comma-shaped organisms with highly refractive extremities; that these bodies later invade and penetrate the red corpuscles, becoming peg-shaped and increasing greatly in size; and that they finally take on a snail-shaped appearance and are extruded into the plasma. The extrusion of the snail-shaped bodies being followed by the appearance of large numbers of trypanosomes and the peculiar movements of the tail-spot being coincident with the presence of the free coccoid bodies would also seem to indicate that in the blood under observation the reproduction of the trypanosomes was effected by the extrusion of the tail-spot which, after undergoing development inside the red corpuscles, eventually became again free in the plasma and there possibly acquired the remaining characteristics of the mature organism.

Southern Nigeria.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF INTUSSUSCEPTION.

BY J. MCDONALD, M.D. EDIN.

ON Feb. 17th, 1903, I was called to a house about one and a half miles distant. On my arrival at noon I found a male child, aged 16 months, suffering from abdominal pain and vomiting and passing blood-stained mucus per anum. These symptoms had come on suddenly an hour previously. On abdominal examination a tumour was detected in the upper portion of the right inguinal region. This tumour was

distinctly kidney-shaped, freely moveable, and tender. I obtained the assistance of my friend Mr. T. Martland of Walsall and returned to the house about 5.30 P.M. prepared to operate. By this time the tumour was much larger, extending from the right iliac fossa across the abdomen to above and to the left of the umbilicus. It was now of the typical sausage shape.

Under anæsthesia inflation with air was first resorted to, an ordinary small hand-bellows being used; this was successful in so far as to reduce the tumour to the dimensions it had presented on the previous visit. The extraordinary resemblance of the tumour in size, shape, and consistency to the kidney was now well marked, so much so as to evoke from my colleague the suggestion that we had reduced the intussusception and that this was a floating kidney. No further reduction could be effected by the aid of the bellows. I therefore opened the abdomen in the middle line below the umbilicus, the incision being just sufficient to admit two fingers. I had no difficulty in hooking out the tumour which was an intussusception of the ordinary ileo-cæcal variety and was reduced without much trouble. After reduction the last inch of the ileum was found to be filled with a mass which felt like soft putty. This I endeavoured to break up and gently to squeeze through the ileo-cæcal valve but though it gave under the pressure of the fingers I was unable to persuade it to pass into the large intestine. Any prolonged attempt at doing so was contra-indicated by the state of the patient and we felt that there was not much risk of any violent peristalsis for some time. I therefore returned the bowel and closed the abdominal wound. At 11 P.M. the same night a motion was passed containing much blood-stained mucus and a little milk curd. Next day there were three movements of the bowels, each containing curdled milk. According to the mother there had been no constipation during the preceding three months; before that she had had much trouble in endeavouring to secure regular action of the bowels. Recovery was uneventful. The temperature never rose above 99° F.

I am much indebted to Mr. Martland for his valuable assistance.

Bloxwich.

NOTE ON A CASE OF RUPTURED VAGINA.

By P. L. TOWNLEY, B.A., M.B., CH.M. SYD.

HAVING never seen or read of a case quite like the following I have considered it worth recording. On June 2nd last I received a telegram, "Mrs.—— in labour; pains suddenly stopped; great pain inside; flooding." I provisionally diagnosed ruptured uterus. Having 90 miles to ride I did not reach the patient's home until next day. On arrival I found a multipara, aged 45 years, obviously dying. Labour had commenced three days previously and about 48 hours before I saw her, during a pain, she had felt a tearing pain in the lower part of the abdomen, after which the labour pains had ceased. I was assured that she had not been interfered with in any way. The patient's abdomen was enormously distended, tender, hard, and tympanitic. A blood-stained, malodorous, thin discharge was coming from the vagina. A loop of pulseless funis was protruding from the vulva. I administered chloroform and on introducing my hand into the vagina found the placenta therein. This I delivered and tore through the cord. Further examination showed the uterus firmly contracted, empty, and unlacerated. Following up the cord, the hand passed into the peritoneal cavity through what had been the anterior vaginal wall. At the other end of the cord was a dead fœtus among the intestines. Of course, any operative procedure was out of the question but I thought it advisable, as the patient was anæsthetised and matters could not be made worse, to attempt delivery. I seized a foot and endeavoured to extract the child through the vaginal laceration. However, I was unable to get the head and shoulders past the symphysis pubis, where they became tightly jammed, so I divided the fœtus through the upper part of the thorax. The woman died about two hours afterwards. The child was at or about full term and was in no way abnormal.

Gayndah, Queensland.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL HANTS COUNTY HOSPITAL, *WINCHESTER.*

AN UNUSUAL CASE OF SUPPURATIVE APPENDICITIS.

(Under the care of Mr. H. J. GODWIN.)

A WOMAN, aged 32 years, was admitted into the Royal Hants County Hospital, Winchester, on Jan. 11th, 1904. She stated that she was in her usual health until a month previously, when she was seized one evening with severe abdominal pains, lasting the whole of the night. The pains were general all over the abdomen, being worse on the right side. She vomited several times. A few days after the onset of the attack she passed several gall-stones; these were seen by her medical attendant She had suffered from constipation and flatulence for more than a year. She shivered on the night of the attack and had had night sweats off and on for the past two weeks. Constipation had been marked and there was slight pain on micturition.

On admission the patient looked ill. The temperature was 99° F. and the pulse was 100. The urine was of specific gravity 1025; it contained no albumin or sugar. The chest was normal. The abdomen was enlarged and moved on respiration. It was resonant all over and slightly tympanitic. On palpation nothing could be felt through the abdominal wall but the abdomen below the umbilicus was tender on deep palpation Per vaginam there was a large swelling to be felt in Douglas's pouch. Rectal examination, which was painful, revealed a mass high up; this was soft and boggy to the touch and projected directly backwards. There was some slight vaginal discharge. This was not offensive.

The patient was given an enema and a considerable quantity of flattened fæces came away. On the day after admission she passed a considerable quantity of very offensive pus from the rectum and on examination the swelling that was felt on the day before had disappeared. The discharge of pus from the rectum continued for two weeks, the rectum being daily irrigated with saline solution. The patien [illegible] and sh [illegible]

On [illegible] charge [illegible] abdominal pains, constipation, painful micturition, and night sweats, and stated that she had not been free from pain in the abdomen since she left the hospital in March. The temperature on admission was 99 4°, the pulse was 80, and the respirations were 24. On examination the abdomen was somewhat distended; it moved on respiration. It was resonant all over and slightly tympanitic. Nothing could be made out by palpation. Per vaginam a large swelling was found in Douglas's pouch which was painful during examination. Per rectum a large fluctuating swelling could be felt [illegible] the rectum a good deal larger than the [illegible] the rectum. [illegible] the patient having been prepared in the usual way, a large abscess was opened through the vagina, letting out a quantity of stinking pus, and the abscess cavity was irrigated and drained. This was washed out daily and packed with gauze until it had healed. The patient improved daily and the temperature remained about normal and never rose above 99°. On May 6th, one month after the abscess had been opened through the vagina, the patient, who was still confined to bed, complained of severe pain low down on the right side of the abdomen and in the back. The temperature rose to 101·4° and the pulse was 84. On examination the abdomen moved on respiration and was [illegible] distended. It was resonant all over on percussion

right iliac fossa and was tender on palpation over the right side. After consultation with several of his colleagues Mr. Godwin decided to operate.

On May 6th the abdomen was opened over the region of the appendix and everything was found to be adherent in the right iliac fossa. On separating the adhesions a little pus oozed from the lower part of the wound. The whole cæcum was firmly bound down to the iliac fossa by a thick mass of inflammatory tissue. This mass was separated from the iliac fossa with the cæcum, being firmly attached to the latter. Having freed the cæcum as far as possible the appendix was sought for. The posterior part of the cæcum was surrounded by this mass of inflammatory tissue and lying imbedded in this a hard substance like a concretion could be felt. On manipulation with the finger on each side of this concretion the appendix was felt and gently separated from the bowel to which it was adherent, lying in a curved direction round the circumference with its apex pointing downwards and inwards. The appendix, which was very much thickened and contained a large concretion, was removed. A gauze drain was inserted and the abdominal wound was closed in the usual way.

On examination of the appendix after removal it was a little over two inches in length, about as thick as an ordinary adult's little finger, and contained a large and hard concretion. No perforation or ulceration of the mucous membrane lining the interior of the appendix could be detected by the naked eye but the inflammatory tissue surrounding the appendix which was removed with it was rotten and friable. The concretion was so large that with the previous history of gall-stones, Mr. Godwin sent it to the Clinical Research Association to be examined, with the following report: "This concretion consists principally of calcium phosphate with a slight admixture of triple phosphate and a considerable quantity of hardened fæcal matter, mainly of a vegetable nature. Cholesterine is not present." The patient made an uninterrupted recovery and was discharged on June 14th quite well.

Remarks by Mr. GODWIN.—I publish the above case for the following reasons.—1. That Mr. A. A. Bowlby in an interesting clinical lecture reported in THE LANCET of July 9th, 1904, p. 61, on these cases, says: "I could multipy these cases and those of which I have seen where there has been a definite discharge of pus from the bowel. I have never had one of them afterwards in which it has been necessary to remove the appendix nor yet where I have heard that the patient has had another attack." 2. Had there not been a concretion in the appendix I believe that I should have missed it as it was so completely imbedded in old inflammatory material. 3. That after two attacks of suppurative appendicitis with abscess the appendix was removed intact as far as could be seen with the naked eye, in the third attack, all occurring within a period of five months. 4. That the removal of the appendix after the occurrence of an abscess seems to me to be just as important as removal of the appendix after an attack of non-suppurative appendicitis and this appears to be a point on which all surgeons differ. 5. That in seven cases of suppurative appendicitis on which I have operated within the last three months in all the appendix was only partially destroyed, in all I removed the appendix, and all recovered. 6. The uterus and appendages and ovaries were examined during the operation and found to be normal.

ROYAL EYE HOSPITAL, MANCHESTER.

A CASE OF UNILATERAL DACRYO-ADENITIS SIMULATING SARCOMA.

(Under the care of Dr. A. EMRYS JONES.)

FOR the notes of the case we are indebted to Dr. John Wharton, senior house surgeon.

The patient, a female, aged 21 years, was admitted to the Manchester Royal Eye Hospital with ptosis of the left lid of 14 days' duration. She had previously had good health and the family history was excellent. The vision and ocular movements were perfect. During the following 14 days a small, firm mass appeared in the outer third of the left upper lid. The lid became œdematous and the skin a dusky-red colour. The movement of the globe in an upward direction became impaired and the globe was displaced slightly inwards, downwards, and forwards. Iodide of potassium and fomentations were used and a search for pus was made with the needle but without result. On the fifteenth day there was marked increase of the pain (which previously had been slight) and during the following 48 hours the globe was pushed well forwards and downwards so that the lower half of the cornea and bulbar conjunctiva was exposed. The fundus at this stage showed congestion of the vessels and the vision was greatly diminished. The cornea quickly became infiltrated and ulcerated in 24 hours. There was marked chemosis of the conjunctiva. In the upper lid and in the position of the palpebral portion of the lacrymal gland a tongue-shaped firm mass could easily be made out and this appeared to be continuous with a mass situated in the upper and outer portion of the orbit. There was neither pulsation nor fluctuation present. On the eighteenth day the cornea perforated and there were three sharp attacks of epistaxis from the left nasal passage. At this stage the globe was immoveable. Throughout the whole duration of the illness the temperature remained normal. The lesion was considered to be a rapidly growing sarcoma of the left lacrymal gland.

The patient was transferred to the Manchester Royal Infirmary on March 18th of this year and the contents of the left orbital cavity were removed by Mr. W. Thorburn. The lacrymal gland was found to be much enlarged, firmly bound down to the globe, and imbedded in a dense fibrous orbital tissue. Microscopically the lesion proved to be subacute dacryo-adenitis (this was confirmed by Professor S. Delépine).

Remarks by Dr. WHARTON.—Dacryo-adenitis is sufficiently rare to justify the publication of the above case. The rapid growth, the epistaxis, and the fact that the enlargement only affected the left side showed its similarity to sarcoma and even microscopically it was not easy to differentiate between subacute dacryo-adenitis and small spindle-celled sarcoma. The rarity of this condition will be seen from the following figures taken from the reports of the Manchester Royal Eye Hospital for the last 21 years. Out of 28,000 in-patients there have been 34 cases of orbital tumour and of these three were cases of tumour of the lacrymal gland.

I have to thank Mr. Thorburn and Dr. A. Emrys Jones for their kindness in permitting me to report this case.

LEEDS GENERAL INFIRMARY.

TWO CASES OF CÆSAREAN SECTION.

(Under the care of Dr. J. B. HELLIER.)

CASE 1.—The patient, aged 25 years, married, was admitted into the Leeds Infirmary on Jan. 14th, 1904. She was short in stature and had rachitic curvature of femora and tibiæ. The pelvis was flat and generally contracted. The oblique conjugate measured three and one-eighth inches, the external conjugate about six and a quarter inches, the interspinous measurement was eight inches, and the intercristal was eight and a half inches. The estimated true conjugate was two and three-quarter inches. Six months before marriage she had suffered from vulval abscess. When, before labour, she applied for attendance in the outdoor maternity department she was urged to come into hospital when full-term approached in order that Cæsarean section might be performed, but she refused and did not agree to operation till labour had commenced. She was admitted on Jan. 14th, late in the afternoon, labour having commenced and liquor amnii having escaped and an unknown amount of vaginal examination having been made.

The operation was performed at 7.30 P.M. by Dr. Hellier assisted by Mr. H. Wales. Chloroform was administered. The abdominal incision was about six inches long, the navel lying in its centre. A corresponding median uterine incision was made, when the edge of the placenta projected into the wound on the left. The child lay with the head below and the back in front. It was delivered by the feet and proved to be a full term male child weighing seven and a quarter pounds and soon breathed normally. After delivery of the fœtus the uterus was drawn forward and an elastic cord was applied around the cervix. 11 silk sutures were placed in the uterine incision and then a continuous catgut suture was used to close the uterine peritoneal coat, thus burying the silk stitches. Sterilisation was effected by partial salpingectomy. The operation was well borne and there was very little hæmorrhage.

The abdominal wound healed by first intention. There was

very little secretion of milk and the child was not suckled. Some anxiety was felt about the patient from the fifth to the eleventh day because the discharge from the uterus became offensive. The pulse and temperature rose and on the seventh day she had a rigor and a temperature of 104° F. The uterus was irrigated with a solution of tincture of iodine and improvement speedily took place. Meanwhile her general condition continued good, there were no signs of peritonitis, the abdominal wound was quite healthy, and the temperature was normal on the eleventh day. She made a good recovery and was discharged cured on Feb. 11th.

The complication noted here might perhaps have been prevented if the patient had consented to enter the hospital before labour. This affords a much better chance of securing an aseptic genital canal at the time of operation and cases so circumstanced yield the best results. See, for example, the case quoted in THE LANCET of Jan. 9th, p. 76.

CASE 2.—The patient, aged 28 years, was sent to the infirmary from the workhouse hospital on June 20th, 1904, by Dr. J. Allan. She had been in labour for about 16 hours and the liquor amnii had escaped. She was four feet two inches in height with rachitic deformity of the pelvis. The oblique conjugate measured two and a quarter inches, the true conjugate about one and three-eighths inches, the inter-spinous measurement was ten inches, the intercristal ten and a quarter inches, and the external conjugate about six inches. On vaginal examination no presenting part could be recognised. The general condition of the patient was good.

Cæsarean section was performed by Dr. Hellier, assisted by Mr. H. Collinson. The uterus was rotated to the right so that the uterine incision was made nearer to the left side of the uterus than the right. The placenta was inserted on the anterior uterine wall, the edge projecting through the incision. It gave no difficulty. The fœtus lay with the head inferior and the back anterior and was delivered by grasping the pelvis and drawing it forwards. An elastic cord was not used and there was very little hæmorrhage. Salpingectomy was not performed. The operation was completed as in the last case and occupied 23¼ minutes. The child was a full term healthy male.

The abdominal incision healed by first intention and there were no symptoms at any time of uterine or abdominal mischief. The patient had an attack of broncho-pneumonia following the operation and the rise of pulse, temperature, and respiration on the second and third day occasioned some anxiety until the cause was diagnosed. The chest complication subsided satisfactorily and she was discharged cured on July 16th.

Remarks by DR. HELLIER.—These two cases may be read in connexion with a clinical lecture on Seven Cases of Cæsarean Section which was published in THE LANCET of Jan. 9th, 1904, p. 76. In Case 2 ether was used partly by inadvertence. I prefer chloroform for operations connected with childbirth. In nine cases of Cæsarean section performed by me chloroform has been used in seven and ether in two, and in both these two broncho-pneumonia has supervened. I think that in records of other operators there has been noted a certain frequence of this condition when ether has been administered during Cæsarean section.

MOSCOW'S SICK AND WOUNDED FUND.—Moscow's allocation of 1,000,000 roubles to the expenses of dealing with the sick and wounded returned from the war proves to be insufficient and another 500,000 will have to be voted, says the *Novoe Vremya*.

NORTH-EAST LONDON CLINICAL SOCIETY.—This society (which meets at the Tottenham Hospital on the first Thursday in
with a lectu
septic Princi
ham Hospital on Thursday, Oct. 6th, at 4 P.M. All qualified practitioners are invited to be present. The officers of the session 1904–05 are:—President: Dr. R. Murray Leslie. Vice-Presidents: Dr. G. P. Chappel, Dr. F. H. Daly, Mr. Walter Edmunds, Dr. J. W. Hunt, Mr. E. Hooper May, Mr. J. S. Sequeira, Dr. F. J. Tresilian, and Mr. R. F. Tomlin. Council: Mr. J. Beddow, Mr. C. Billson, Mr. R. P. Brooks, Dr. R. E. Foott, Dr. E. A. Lermitte, Mr. G. A. Hunt, Dr. G. Norman Meachen, Mr. D. Petty, Dr. A. S. Ransome, Mr. T. Rushbrooke, Mr. A. S. R. Wainwright, and Dr. E. F. Willoughby. Honorary treasurer: Dr. A. E. Giles. Honorary librarian: Dr. A. J. Whiting. Honorary secretaries: Mr. H. W. Carson and Mr. C. E. Hutt.

Reviews and Notices of Books.

Arhythmia of the Heart: a Physiological and Clinical Study. By Dr. K. F. WENCKEBACH, Groningen. Translated by THOMAS SNOWBALL, M.B., M.A. With seven plates and 20 figures in the text. Edinburgh and London: W. Green and Sons. 1904. Pp. 198.

IT is a hopeful sign in connexion with physiological and clinical studies that busy practitioners in our provincial towns find leisure to prosecute these studies and to add important contributions to the subjects which they set themselves to investigate. The work before us confirms in large degree the well-known researches of Dr. James Mackenzie of Burnley, while the English version itself is the work of an erudite provincial practitioner, also of Burnley. We congratulate Dr. Snowball both on his enterprise and his success.

The work is divided into three unequal chapters. Chapter I. (pp. 1–29) deals with the Theory of the Myogenic Action of the Heart; Chapter II. (pp. 29–134) with Physiological Types of Arhythmia; and Chapter III. (pp. 157–180) with Clinical Types of Arhythmia. The arguments from development, phylogeny, experiment, and action of poisons for the myogenic theory of cardiac action are fully set forth and anyone wishing further information regarding the battle of muscle and nerve on cardiac soil will find still more details in the *Ergebnisse der Physiologie I.* by Biedermann and Langendorff, or in the numerous papers by Engelmann of Berlin. The author supports the myogenic theory and submits to sharp criticism the arguments of the supporters of the neurogenic theory, more especially those of Kronecker and Cyon. Full use is made of the "all or nothing" and "maximal contraction" of the heart discovered by Bowditch in 1871 and the refractory period of the heart observed by Marey in 1875. Engelmann in particular has used very extensively the method of "extra-systole" in his investigations. As bearing on the myogenic theory and perhaps also on the investigation of the inmost processes in the heart muscle cells themselves we are glad to see introduced to English readers a very full account of Loeb's remarkable researches on the action of "ions" on cardiac muscle, thus tending to bring the study of this subject more and more within the domain of chemical activity, and on this ground rendering the pharmacological action of chemical substances an important helpmeet in unravelling the mysteries of contraction, conduction, and rhythm. That cardiac cells are endowed with various properties we know, and it matters little whether we adopt the classification of these properties by Engelmann as *chronotropic*, affecting stimulus production; *dromotropic*, affecting conduction; *bathmotropic*, affecting excitability; and *inotropic* affecting contraction. All these properties, or any one of them, may be affected both positively and negatively. They are independent in nature and in magnitude. In this way we may compare the cardiac cells to gland cells which, under different conditions, give off a very complex secretion and, it may be in addition an internal secretion. Let anyone but think of the marvellous mechanism of a liver cell with all its potentialities and the numerous chemical processes of which it is the seat and the varied products it forms and his view of cardiac myogenic activity will be expanded. This very [illegible] of these cardiac functions makes it possible for such [illegible] changes to occur in the heart, either as a direct [illegible] change or one brought about by the influence of [illegible] and helps to show how the heart can, by virtue of its [illegible] properties, preserve its rhythmical action even in the presence of many disturbing influences and how it can [illegible] many different claims on it, while its peculiarities [illegible] strong stimuli [illegible] up an excessive [illegible]

heart in the way of a response corresponding to the magnitude of the stimulus, thus proving an admirable defence against the influence of passions and nerve storms on this citadel of life.

In the chapter on Physiological Types of Arhythmia it is shown that extra-systoles may occur in the mammalian heart —including that of man—as well as in the amphibian heart. The simplest case in a pulse apparently normal is when a beat is missed in an *intermittent* pulse. On auscultating the heart, while feeling the pulse, at the beginning of the intermission the heart gives apparently two beats in succession instead of one. The intermission corresponds to the compensatory pause. Each case of extra-systole must be studied by itself, as extra-systoles do not by themselves possess diagnostic significance and no conclusion can be drawn from their presence as to any particular form of cardiac disease; they show, however, that the heart is disturbed in rhythm and stimulated into extra contractions by abnormal agencies. In some individuals we have "irritable weakness" which manifests itself in organs other than the heart. A great class of extra-systole is produced by changes in organs unconnected with the heart or circulation—i.e., reflexly from the stomach or intestine, or from toxic substances in the blood. The doctrine of "heart block," or disturbance in conduction, is fully treated of by the author in support of his view on the numerous causes that produce allorrhythmia, and what holds true of the frog's heart in this regard seems to hold for the mammalian heart. The author asks what drugs have a beneficial effect on cardiac conduction? Even with all our knowledge of the action of digitalis the cardiac pharmacology of this drug still remains to be written. Each of the four fundamental properties of cardiac muscle is treated and it is shown how variations in these properties may lead to arhythmia, which necessarily must be as varied as its causes, and therefore of very unequal clinical significance. This leads the author to claim that there must be a new classification of the irregularities of the heart and a vigorous and logical attempt made—as is made in Chapter III.—to adapt our clinical notions to modern knowledge. He points out the misleading term known as "pulsus bigeminus" and several other terms as old as Galen and the Alexandria school.

We cordially commend the study of this work to medical practitioners, both for the value of its clinical observations and its careful *résumé* and criticism of modern experiments made on the hearts of animals, which prove a sound basis for elucidating the problem of cardiac pathology and arhythmia in all its forms. There is a short appendix on works published since the original book appeared as well as a good bibliography, but, unfortunately, there is no index.

An Introduction to the Study of Spectrum Analysis. By W. MARSHALL WATTS, D.Sc. Lond., B.Sc. Vict., F.I.C. With coloured plate and 135 illustrations in the text. London: Longmans, Green, and Co. 1904. Pp. 325. Price 10*s.* 6*d.*

THE spectroscope as an aid to human observation holds its own. Beside it the penetrating powers of the telescope and the microscope pale into insignificance. The telescope, it is true, has enabled us to make wonderful revelations, which are still more wonderful by the application of photography—the microscope has thrown a light upon the structure of things, but what are these achievements compared with an instrument which reveals to us not only the composition of the sun and stars but also the presence in the atom of electrons or, as Mr. Balfour calls them in his presidential address to the British Association for the Advancement of Science at Cambridge, electrical monads, thousands of which occupy the space of the atom. The principles of the spectroscope are at the outset well explained in the opening chapters of this book but the author evidently presupposes a knowledge of physics or at least of light and mathematics on the part of the reader for whom this book is written as an introduction to the study of spectrum analysis. Unless the reader posseses these qualifications we fear that he will get into difficulties as soon as he reaches p. 4 of the book in the chapter on How to Produce a Spectrum. The structure of the spectroscope is detailed and the advantage of introducing a series of prisms is explained. In Chapter II., which is all too short, the author deals with flame spectra which is that portion of the subject which concerns the analysts in the chemical laboratory who employ the spectroscope for the detection of elements. Chapter III. contains an account of the spectra produced by electric discharge through a vacuum-tube. Here the author might with advantage have included an account of the methods employed for filling the tubes with the gases under examination. In Chapter V. are described the method of producing a spectrum by the use of diffraction gratings and the measurement of wave lengths. Here, again, the beginner without a knowledge of light and mathematics will experience some difficulty in following the author. The rest of the book is practically devoted to the spectra of the stars and nebulæ. The author evidently shows a leaning to this section of the subject. From p. 185 to p. 310 inclusive are a comprehensive catalogue of the spectra of the elements and a table of standard wave lengths. The book will be valued, we are sure, by a certain class of reader but we had hoped from its title that the stepping-stones to the subject would have been more gradual than as they are actually presented.

A Practical Treatise on Nervous Diseases. By F. SAVARY PEARCE, M.D., Professor of Nervous and Mental Diseases in the Medico-Chirurgical College of Philadelphia. London: Sydney Appleton. 1904. Pp. 401. Price 14*s.* net.

AMONG the numerous introductory text-books of nervous disease in England and America which serve as stepping-stones to the advanced standard works of Gowers, Mills, and Dana, the present volume of 400 pages will occupy a useful and welcome place. It is written for the student and practitioner and its aspect is in general clinical and practical. Thus the chapters on anatomy and physiology, usually separated in most text-books of this class, are judiciously blended into one by Professor Pearce with benefit, we think, for the student. The opening chapter dealing with the general anatomy, physiology, and chemistry of the nervous system occupies 50 pages. In this brief compass all important facts are brought together such as are necessary to be known by the student of neurology. The style of description is clear and intelligible and the knowledge of anatomy and physiology conveyed in the text seems to be of a high order as regards accuracy and insight. The author is to be congratulated on the special excellence of this portion of the book.

The following chapters deal with clinical examination and methods of testing and case-taking. Here also a high level of teaching is maintained. The descriptions are clear and simple and no student should fail to understand what the author means. Next comes the treatment of nervous diseases generally, and in regard especially to hydrotherapy, massage, electricity, and hypnotism The care of convalescents and the question of suitable climate are also dealt with briefly but ably. A systematic account is then given of the various diseases and disorders of the nervous system, cerebral and spinal. The symptomatic disorders such as vertigo, insomnia, neuralgia, headache, migraine, and Ménière's disease are well described,

as well as the affections of cranial and spinal, including peripheral, nerves. The rest of the volume, which occupies 230 pages, is devoted to an account of the special diseases, organic and functional, of the nervous system generally. Localisation of functions in the brain is illustrated by excellent diagrams, while the morbid processes which occur in the meninges or investing membranes of the brain and spinal cord are described at some length with several good figures. The diseases of the brain and cord which are next treated individually are illustrated nearly always with reproductions of photographs of the cases. We notice that among the general and functional diseases special attention is given to the various types of chorea, hysteria, and neurasthenia, these neuroses being dealt with at greater length than is usual in an introductory text-book. The toxæmic neuroses from alcohol, drugs, and metallic poisoning are also treated with adequate fulness of information. General paralysis of the insane is included among the list of nervous diseases and is well described, a tribute to the conventional usages of neurology, though this is a grave form of mental disorder which belongs to the realm of psychiatry.

Professor Pearce has written, on the whole, a book which though unambitious is, as we have indicated, likely to be welcome and useful, and the illustrations (91 in number, many of them in colours) and the general get-up of the book reflect credit on the publishers.

Anæsthesia in Dental Surgery. By THOMAS D. LUKE, M.B. R.U.I., F.R.C.S. Edin., Anæsthetist to the Dental Hospital and Instructor in Anæsthetics to the Royal Infirmary, Edinburgh, &c. London: Rebman, Limited. 1903. Pp. 178. 28 Illustrations. Price 5*s*.

THIS book comprises ten chapters and an index. It deals with the history of anæsthesia, nitrous oxide, ethyl bromide, and ethyl chloride, their combination with ether and oxygen; and local anæsthesia Chloroform as an anæsthetic in dental operations is discussed and Mr. Luke opposes its use upon the ground that other agents are safer and render its employment unnecessary. Further chapters are devoted to Anæsthetics in Special Cases, Management of Prolonged Extraction Cases, and the Accidents of Anæsthesia. We gather that the author regards nitrous oxide given continuously through the nose as the best anæsthetic for dental cases when the operation is prolonged and that he does not regard the "gas and oxygen" method as possessing special advantages over nitrous oxide, save in a few pathological conditions. He, however, uses oxygen, allowing it to be inhaled from time to time when the symptoms indicate its use. In this way no complicated apparatus is needed. Mr. Luke is in favour of chloride of ethyl and gives clear rules for its administration. He employs a Clover's inhaler. With regard to other methods advised in this book it may be said that they harmonise with those in common use and described in the manuals. The scope of the volume is purposely restricted but so far as it goes it must be considered satisfactory for those in whose hands it will be placed. The descriptions and illustrations are clear and render it possible for the student to acquire the groundwork of his subject before assuming the rôle of anæsthetist. Mr. Luke has pronounced views which he states vigorously and his teaching is upon the whole sound, practical, and conclusive, although the book might gain by compression and some omissions and re-arrangement of the chapters. In the matter of literary style even a small manual is deserving of heedful care. The sentences in the book before us often extend to seven or more lines and as a result are confused and terminate abruptly. No doubt future editions will furnish the author with an opportunity of revising this side of his work and of correcting such slips as "nitrate of amyl"; "considerable skill and practice is needed to use the apparatus efficiently"; "it is possible to liquefy nitrous oxide with a pressure of 50 atmospheres at a temperature of 70° C." Of course, the temperature should be 7° C. Again, "Liquid N_2O—e.g., ·936—" we presume should read "—sp. gr. ·936."

It is a more grateful task to turn from considering the blemishes and to point out the merits of this little manual. Perhaps the greatest of these is the care with which the author has gone into detail with regard to the management of the patient and the anæsthetic during dental operations. In the case of chloroform, the use of which in these cases as we have said is deprecated, minute directions are given. These should prove serviceable in practice. In dealing with "accidents," although syncope and asphyxia are discussed, it seems to us that Mr. Luke might have elaborated the subject. It is commonly the minor troubles which puzzle the average anæsthetist and most of these may when recognised be readily removed. Total inversion (Nélaton) deserves mention. It is most valuable in non-toxæmic syncope, and Laborde's tongue traction—which, by the way, is ascribed to Lord Lister—is a measure which should only be used in serious danger on account of the severe damage to the tongue which its practice involves. We notice that on p. 144 "accidents" under chloroform, which the context seems to indicate were deaths under chloroform, are said to have occurred "in the hands of men like Simpson, Syme, Erichsen, Billroth, Volkmann," although we have always understood that Syme's proud boast was that he had never seen a chloroform fatality. Chloroform is spoken of as possessing dangerous qualities on account of "the capricious way in which it acts on different people." This was the finding of the "Glasgow committee" *but we believe that the trend of modern* thought in matters of anæsthetics is to relieve chloroform from the aspersion of possessing any capriciousness in its mode of action.

Lectures, chiefly Clinical and Practical, on Diseases of the Lungs and the Heart. By JAMES ALEXANDER LINDSAY, M.A., M.D. R.U.I., F.R.C.P. Lond., Professor of Medicine, Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast; Consulting Physician to the Ulster Eye, Ear, and Throat Hospital, Belfast; Examiner in Medicine in the Royal University of Ireland; *late President of the Ulster Medical Society.* London: Baillière, Tindall, and Cox. 1904. Pp. 447. Price 9*s*.

THE lectures contained in this volume were delivered by Professor Lindsay at the Royal Victoria Hospital, Belfast. They are intended to raise and to discuss most of the problems of diagnosis, prognosis, and treatment which confront the practitioner in the field of thoracic disease. The object of this work, therefore, is essentially practical and it will be found that the clinical standpoint has been adopted throughout.

Lectures I. and II. are not directly concerned with diseases of the lungs and heart but deal with the theory of clinical observation and the philosophy of medicine in general. The lecture on Pleurisy is admirably compiled and will well repay careful study. The relation of pleurisy and tuberculosis is entered into very fully. It is now generally admitted that this relation is much more intimate than was formerly supposed and Professor Lindsay carefully considers the evidence which has accumulated in favour of the belief that a large proportion of cases of pleurisy are tuberculous in origin. Professor Lindsay, however, does not adopt the dictum that acute pleurisies are for the most part of this nature and maintains that such a statement does not rest upon any secure pathological basis and is not easily

reconciled with clinical facts. The ultimate prognosis in cases of apparent idiopathic pleurisies is of considerable importance when an individual presents himself for examination for life assurance with a history of having suffered from pleurisy some years previously. Professor Lindsay maintains that such cases may be accepted at ordinary rates if two years have elapsed since the attack of pleurisy and if the general health, pulmonary expansion, and weight are satisfactory and provided that the habits and mode of life are favourable. We do not think, however, that this view will meet with general acceptance.

We recommend to the notice of our readers Lecture VII. which is headed "Conditions which simulate Pulmonary Phthisis." It is to be regretted that the term "pulmonary phthisis" has been retained, "pulmonary tuberculosis" is more exact and explicit, but this phraseology does not detract from the general excellence of Professor Lindsay's remarks on the differential diagnosis of the disease. He recognises three groups of cases: (1) diseases which may closely simulate "pulmonary phthisis" but which, owing to their infrequency, give rise to little difficulty in practice —viz., actinomyces, malignant disease, and syphilis; (2) diseases which simulate tuberculosis but in which, owing to well-marked differences in history, symptoms, and physical signs, the differential diagnosis is, as a rule, easy —viz., pulmonary collapse, bronchiectasis, and pulmonary embolism; and (3) a group which may closely simulate "pulmonary phthisis" and in which the differential diagnosis often presents great difficulty—viz., bronchopneumonia, pleurisy, bronchitis, asthma, anæmia, and neurotic dyspepsia. It is naturally to this third group that Professor Lindsay principally directs his remarks and many useful suggestions are made.

In discussing the treatment of pulmonary tuberculosis some apt observations are made as to the meaning of the word "cure" when applied to this disease. Professor Lindsay asserts that by "cure" in this connexion must be understood not an absolute *restitutio ad integrum* (which he maintains is a very rare event) but rather the complete restoration of the general health, with abeyance of all symptoms, restitution of average working power, and locally the signs of a limited and quiescent lesion. We believe that this definition will be generally accepted. Some authors when discussing "hæmoptysis" mention many conditions other than pulmonary tuberculosis which may bring about this symptom. We entirely agree with Professor Lindsay, however, in insisting that if heart disease and blood dyscrasias can be excluded there is a strong probability that tubercle is the cause of the hæmorrhage. We corroborate his opinion that nearly all attacks of hæmoptysis where no other obvious morbid state coexists are due to pulmonary tuberculosis. In a lecture entitled "Therapeutic Problems in Pulmonary Disease" the treatment of asthma is discussed. Most physicians will probably agree with Professor Lindsay in naming iodide of potassium and arsenic as the most useful drugs in the therapeutics of asthma. We are surprised, however, to find no mention of compressed air baths amongst the remedies adopted in the treatment of this disease; these baths have afforded excellent results in the hands of some observers.

The lectures on Physical Examination of the Heart, Physical Diagnosis of Cardiac Disease (Cardiac Murmurs), and Physical Examination of the Blood-vessels contain numerous suggestions and valuable advice as to the clinical study of individuals who present symptoms suggestive of cardiac disease.

Patients frequently consult a physician, stating that they have "heart disease"; on questioning them, however, it will be found that it is their own diagnosis and fortunately it is usually wrong. The symptoms of cardiac disease are multiform and the majority of them are referred to other viscera, whilst affections of other organs (notably the stomach) produce symptoms which the laity believe to be caused by disorders of the heart. The lecture on the Study of Cardiac Symptoms indicates the multitudinous phenomena which may present themselves when the heart is diseased. The classification adopted is necessarily a lengthy one but we believe that it will be found useful for clinical purposes.

The lectures on the Diagnosis, Prognosis, and Treatment of Affections of the Heart will all be found interesting. Professor Lindsay has adopted the useful plan of providing a summary of each lecture; this greatly facilitates reference. We offer him our congratulations on having written a valuable and instructive work.

Atlas zur Vergleichenden Histologie der Wirbelthiere. (Atlas of the Comparative Histology of Vertebrates.) With Explanatory Text on the Basis of the Researches and Original Preparations made and drawn by N. LOEWENTHAL, Professor of Histology in the University of Lausanne. Containing 51 plates with 318 figures. Berlin: S. Karger. London: Williams and Norgate. 1904. Pp. 109. Quarto. Price £1 16s.

THE author of this well and liberally illustrated work states in the preface that he does not intend it to be a complete treatise on histology and has not therefore copied from other writers and draughtsmen. He has rather sought to place before his readers a large number of drawings which in the course of his long experience in the domain of microscopical research have accumulated on his hands and to which he has added something more in the way of text than a mere reference to the lettering of the figures. The drawings have been in all instances made by himself from successful preparations and out of the 318 only ten have been previously published. The subjects illustrated embrace cartilage, bone, connective tissue, muscle, nerve, spinal cord and brain, epithelium, ovum, spermatozoon, gland tissue, vessels, and blood. The staining and other proceedings employed in the preparation of the specimen are described in each case as well as the magnifying power used. The specimens were derived from many different sources, as from the frog, triton, lizard, tortoise, bird, rabbit, rat, hedgehog, and man. The drawings representing cartilage show that in some sections of the head of the femur of the triton the superficial cells give off long branched fibres which run parallel to the surface, whilst in other sections islands of cartilage are seen which the author suggests indicate that a direct conversion of cartilage into bone may take place, the cartilage cells becoming osteoblasts. In the sclerotic cartilage of the tortoise treated with alcohol, alum, carmine, and glycerine the cells of the deeper part near the choroid contain numerous dark-brown or black pigment granules, whilst those in the cartilage of the trachea of the rabbit present oil drops which are coloured black with osmic acid. Many figures represent sections of parts which possess exceptional interest and are not commonly illustrated in histological works. Thus in different figures are shown cells derived from the decidua vera of a pregnant human uterus, others from the Pacchionian bodies, and others again from the corpuscles known as those of Grandry, Herbst, and Meissner. Sections of pineal gland and pituitary bodies are figured and there are numerous drawings, all delicately executed, of various parts of the nervous system in man and animals.

The explanatory comments on the figures in the plates are frequently of considerable interest and as an example we select one that accompanies Fig. 3, Plate XL., which represents a Graafian follicle of exceptionally large size taken from a blindworm treated with Kleinenberg's fluid and stained with hæmatoxylin. It had a diameter of 525 μ. The drawing represents the appearances seen under a magnification of 270. "The amorphous constituents of the nucleus,"

Professor Loewenthal says "have increased considerably (as compared with the preceding drawing which represents an earlier stage), whilst the nuclear filaments have retrogressed and become broken up so that in the centre of the nucleus there is a small portion which appears to be formed of a heap of granules These granules appear to be in part independent and isolated but in some instances attached to short fibres of granular aspect that a comparison with an earlier stage shows to proceed from the nuclear filaments In the larger remaining portion of the germinal vesicle two not sharply differentiated zones may be observed—an internal coarsely granular zone presenting numerous bodies resembling nucleoli surrounded with a clear border or margin, and an internal clearer, and more finely granular zone The sheath or investment of the nucleus is also to be noticed The space between the membrane of the nucleus and the contents of that body seen in the figure must be regarded as the result of manipulation There is still another point to be noticed External to the nuclear membrane there is a layer having a thickness of from 2 7 to 10 μ which is sharply differentiated from the yolk and if not a true membrane is at least a special layer of the yolk This layer presents a more or less radial striation and the nuclear membrane cleaves to it more firmly than to the nuclear substance itself hence in shrinking the nuclear substance separates from the layer and a space intervenes between the two This account describes the features of a beautifully executed figure and is only one of many The work should be in the possession of, or consulted by all histologists

LIBRARY TABLE

Diet and Food Considered in Relation to Strength and Power of Endurance Training and Athletics By ALEXANDER HAIG M D Oxon F R C P Lond London J & A Churchill 1904 Pp 138 Price 2s net —In the preface to this little book the fifth edition the author writes that the interval which has elapsed since the last edition was issued has only served to deepen his conviction of the importance mental and physical, which attaches to the right understanding of dietary questions As mind is a function of the body and the body is dependent on the material at its disposal for the purpose of stability and renewal it is obvious that each power must be dwarfed or destroyed when the instrument of its manifestations is impaired Experience and experiment strengthen the author s belief that in adopting the stimulative forms of diet the race entered upon a path which could only lead as it has done to the mental and physical diseases which now baffle the scientific man and the moralist alike These pages he says are written in the hope that he may make clearer the position that diet holds in relation to matters of strength and nutrition and to attempt the alteration of people s diet so as to free it from the poisonous xanthins and uric acid The four chapters into which the book is divided treat of Some Points in the Physiology of Albumin and Urea, of the Physiology and Pathology of Fatigue, of Foods Available their Properties and Relative Importance, and of Values of Foods in Albumin and Urea Quantities Required, Diet of Training and Athletes The author classifies the uric acid free foods into the following groups (1) milk and milk products as cheese, (2) breadstuffs cereal foods and glutens, (3) nuts and nut foods, (4) garden vegetables as potatoes, (5) garden fruits, as apples, and (6) dried and foreign fruits By the combinations of foods which he recommends Dr Haig has reduced his own uric acid turnover from about 20 grains per day to a little over ten grains per day, with the result that he is now practically free from the diseases from which he formerly suffered Tables are given showing how the required albumins can be obtained from a diet of breadstuffs fruit, vegetables, milk and cheese, from breadstuffs alone, and from a diet consisting of milk and cheese, fruit and vegetables, the latter a convenient one for people who desire to be almost independent of cooking A scheme is also given for gradually altering the diet Dr Haig says that the vegetarians of this country would be better still if they not only ruled out animal flesh but also eggs, the pulses asparagus and mushrooms, as well as tea, coffee and cocoa all of which contain a large amount of uric acid or substances physiologically equivalent to it The book throughout conveys the impression of the sincerity of the writer in his belief but as we said in reviewing the fourth edition in our issue of Feb 7th, 1903 we do not think that the human machine is such an automaton as Dr Haig implies

Medical History of Prisoners of War in Ceylon 1900 1903 By ALLAN PERRY, M D Durh D P H R C P S Lond, in medical charge of the prisoners of war Colombo George J A Skeen 1904 Pp 36 —The information contained in these pages is compiled from the author s official reports to Government on the health of the prisoners and from reports published by the officers of the Civil Medical Department in charge of the various camps For the number of prisoners and some other details the author has availed himself of the report by Lieutenant Colonel A C F Vincent C M G the commandant The duties thrown on the Civil Medical Department by the advent of the prisoners were numerous heavy and responsible The professional staff performed the extra work in connexion with the Boer camps with efficiency and enthusiasm and without any interference with the ordinary departmental routine The main camp was at Diyatalawa and all permanent buildings were made of corrugated iron Five subsidiary camps were subsequently used where the medical and sanitary duties were performed by the Ceylon Civil Medical Department assisted by two officers of the Royal Army Medical Corps The prisoners of war at Diyatalawa were represented by 27 nationalities The general tone of the camp at first was one of deep depression which was intensified by the meteorological conditions and accentuated by an over indulgence in religious exercises A severe epidemic of measles and two epidemics of enteric fever occurred at Diyatalawa the other camps were free from epidemic disease The general health of the prisoners was on the whole good and the sick and death rates would the author says compare favourably with those of any similar body of men placed in similar circumstances elsewhere The prisoners were remarkably free from venereal diseases the reason being that most of the men had lived pastoral lives and did not come from towns There were no instances of the later manifestations of the disease contracted in early life The suspicious character of the Boers was brought into prominence in connexion with surgical operations This small history is an interesting one A folding map of Diyatalawa camp is included in the book

Practical Materia Medica for Nurses with an Appendix By EMILY A M STONE Second edition London, Philadelphia and New York W B Saunders and Co 1904 Pp 300 Price 8s net —This the second edition of this book has been largely rewritten While the arrangement of the subject matter has not been changed numerous alterations and additions have been made in order to bring the book up to date and to make it a more complete guide to those engaged in nursing The author was formerly superintendent of the training school for nurses, Carney Hospital, South Boston, and the book constitutes a companion to her other work 'Practical Points in Nursing It has been made as practical as possible The first of the three parts into which the book is divided is devoted to

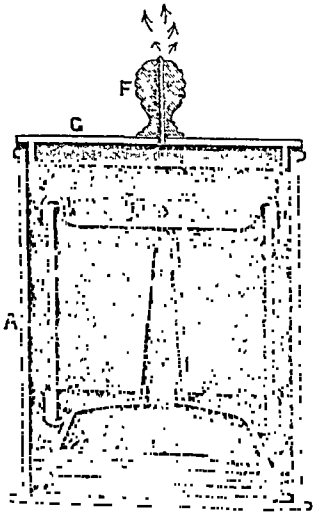
the general consideration and classification of drugs; the second part to the subject matter proper of the lectures; and the third part, or appendix, treats of poisons and their antidotes, emetics, mineral waters, weights and measures, and gives a dose-list and glossary. The doses of all drugs are given in both apothecaries' and metric weights. The book is a sound one, the subject matter is well arranged, and the information given is such as is well suited to be helpful to nurses in carrying out their duties.

Laws of Health. McDougall's Educational Company, Limited. 1904. Pp. 80. Price 6*d.* net.—The first 22 pages of this little book are devoted to a description of the structure and functions of the body. The second chapter deals with the composition and chief impurities of air and water. Subsequent sections treat in turn of food, the proper care of the body, ventilation, heating and lighting, drainage (including the removal of refuse), the spread of diseases, and first aid. The whole tone of the book is judicious. It is very simply written and it contains a mass of information that will be useful to all classes of the community. The wide spread of such knowledge will add health and happiness to all homes where it is rightly appreciated. There is a useful index, so that the subject matter may be quickly referred to and the illustrations are clear.

New Inventions.

A NEW STERILISER FOR SURGICAL DRESSINGS.

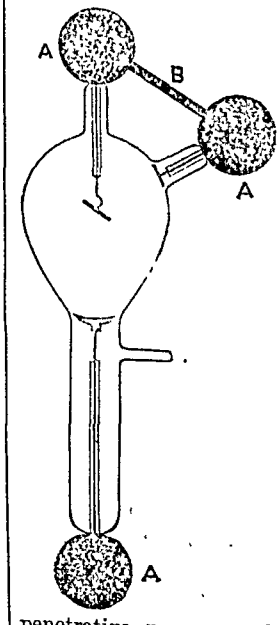
THE apparatus shown in section in the accompanying illustration is not intended to compete with large hospital sterilisers but only to be used by surgeons performing operations in private houses where it is difficult to obtain really sterile dressings and towels. It consists of an outside can, slightly over nine inches high and seven inches in diameter, into which there fits tightly (only removeable for cleaning) an inverted funnel (E). The cover (G) closes the can. The outside can (A) contains the dressing can (B), which has an air-tight lid (D), provided with a handle and also has an opening in the bottom, with a tube rising therefrom fitted with a screw by means of which it can be attached to the funnel (E) as shown in the illustration. The bottom of the dressing can is perforated and its sides are prolonged past the bottom so as to receive an extra lid which, when placed in position, closes the bottom of the can completely. The whole is strongly made of copper, tinned on the inner surfaces and when empty weighs six and a half pounds. The necessary amount of water for three quarters of an hour's boiling is one and a half pints and any small Bunsen's burner or oil or spirit lamp, or even an ordinary kitchen range will boil it readily. When the dressings and (if thought desirable) instruments have been packed in the dressing can the upper lid (D) is closed and the can is screwed into its position within the outer can (A), as shown. The extra lid is put in on the top (where room for it is provided, not shown in the figure) and the outer cover is closed. The water should previously have been made hot and when it boils the steam follows the course shown in the figure and thoroughly permeates the whole of the contents of the dressing can and finally comes out through F. I think it is wise to take as the commencement of the time of sterilising the moment when there is a column of transparent steam at least six or eight inches high issuing from F. When a sufficient time has elapsed the outer cover is removed, the extra lid is carefully lifted by its edges and placed with its tinned side upwards upon a flat surface; the dressing can is then unscrewed, lifted out and pressed down upon it. The dressings or other articles are then inclosed in an air-tight box and can be carried in an ordinary surgical bag to the bedside and need not be opened until actually required. The size which Messrs. Allen and Hanburys, Limited, of 48, Wigmore-street, London, W., have made for me I find to be the most convenient. It is large enough for small operations and for larger ones it is really more convenient to have two dressing cans, the first with towels and preparatory material, and the second with the dressings and bandages, and on their top the sutures, &c., for closing the wound. A larger size could also be made if required. I usually prepare my dressings the day before. It will be seen from the above description that the dressings remain untouched within the case until they are opened by the surgeon or nurse at the time of using. The price of the steriliser, complete, is £2 2*s.*



Burton-on-Trent. EDWARD C. STACK, F.R.C.S. Irel.

AN IMPROVEMENT IN X-RAY TUBES FOR USE WITH STATIC MACHINES.

IT is common knowledge that powerful static machines are capable of exciting an x-ray tube in such manner as to give off absolutely steady rays of great brilliancy as regards screen work and of good penetrative power. But the difficulty has always been that the rays are apt to decline suddenly in power and the current to find any other path rather than that through the tube. To obviate this difficulty I have contrived the simple device here shown. It consists of a brass ball of fair size A (an inch and five-eighths in diameter on my own tube) fitted over each terminal of the ordinary bianodal tube, the anode and anti-cathode being connected by a piece of stout round brass rod B (three-eighths of an inch in diameter), thus supplying terminals of very perceptible electrical capacity and at the same time doing away with all edges, salient angles, and points of metal from which leakage formerly took place. The tube is connected to the machine by means of thickly insulated wire fitted with a fair-sized brass ball at each end, and these need not quite touch either the terminal knobs of the machine or those of the tube. By this means I obtain from my machine (a 12 plate, 30 inch Wimshurst) rays as steady as the light of an incandescent lamp, of great brilliancy and penetrative power, much less trying to the eyes than the flickering light shown by those from a coil with any but the most rapid break, and quite constant and reliable. Moreover, the tube never works hot, and I understand that dermatitis from rays generated by a static machine has not yet been seen.



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THE LANCET.

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Ante-natal Nurture and Physique.

IN this week's issue of THE LANCET we publish a letter from Dr. HENRY ASHBY which raises a question in the etiology of physical degeneration which is of fundamental importance. Briefly stated, Dr. ASHBY'S contention is that the health and vigour of the offspring are, to some extent at least, determined by the standard of nutrition obtaining in the mother during the period of pregnancy. He further appears to take exception to the prominence which he considers that we gave to the evidence of Professor D. J. CUNNINGHAM and of Dr. EICHHOLZ in our summary of the report of the Inter-departmental Committee on Physical Deterioration. In this summary, which appeared in THE LANCET of Sept. 10th, p. 785, we admit that we gave a fuller account of the evidence of the two witnesses referred to than we did of that of others who were under examination before the committee at the same time and in reference to the same subject—i.e., the influence of hereditary taint. We must disclaim, however, any wish to bias the issue or to emphasise unduly the views expressed either by Professor CUNNINGHAM or by Dr. EICHHOLZ. We believed, and still believe, that the opinions of these witnesses were of sufficient importance to deserve publicity and possibly to evoke criticism; in this latter belief we have not been disappointed, as is evidenced by the letter from Dr. ASHBY to which we have referred. In the official report it is stated that "Dr. EICHHOLZ was disposed to go further and sought to explain how some mysterious law of transmitted impulse made for the recuperation of each generation, the unborn child fighting strenuously for its own health at the expense of the mother." To this view, as also to the opinion of Dr. EICHHOLZ "that most children were born physically healthy, whatever the condition of the mother might be antecedently," the committee evidently did not entirely subscribe, for in paragraph 249 of the report the following appears: "The committee cannot ignore these opinions though it may well be that the depressing effects of the life struggle on parents are nevertheless in some measure transmitted to the offspring."

Discussion on the subject of maternal influence on the development of the embryo, as also on the closely allied subjects of the inheritance of acquired characteristics, of the etiology of congenital malformations, and of maternal impressions, very frequently brings the practical physician into direct conflict with the trained biologist. The physician at times has unique opportunities for making practical observations on these very subjects. The biologist, on the other hand, objects that the deductions which medical men are apt to draw from these observations are opposed to elementary biological principles. And so the matter stands, for the experimental evidence which biologists adduce in support of their theoretical contentions is open to just as much criticism as are the deductions made by medical men from their clinical experiences. If, however, the official report correctly represents Professor CUNNINGHAM'S evidence before the committee, and the latter actually expressed "the firm belief that diseases such as syphilis and alcoholism transmit their effects to the third and fourth generation," it is difficult otherwise to interpret his meaning than that in his opinion acquired characteristics can be transmitted. This is a far bolder admission than simply to allow that the general nutritional condition of the mother can influence the general nutritional condition of the fœtus in her uterus, and yet if we understand him aright this is all Dr. ASHBY claims, but apparently it is with this very belief that Professor CUNNINGHAM is in disagreement, for once again, to quote the official report, "Professor CUNNINGHAM'S views that inferior bodily characteristics the result of poverty and not of vice are not transmissible were confirmed ....." If it be admitted that the effects of alcoholism and of syphilis can be transmitted to the third and fourth generation it is no great assumption to allow that other pathological states due to perversion of metabolism may be similarly transmitted.

Dr. ASHBY instances the observations and experiments of Dr. NOEL PATON and of Dr. PROCHOWNICK on the influence of maternal diet on the size and vigour of the fœtus and to these we might add the experiments of Dr. LAHMANN and of others whom the latter quotes in support as substantiating the same view that the mother's nutrition does affect the child. Owing to the analogy between the method of growth of reproductive and embryonic tissues on the one hand and that of tumours on the other, and owing to the admitted potentialities of the latter for living on the tissues of the organisms in which they grow, it might on theoretical grounds be assumed that the fœtus in utero would have similar parasitic tendencies to thrive at the expense of its host. Experimental evidence, however, does not seem to warrant this view, for investigations on the effect of food in the case of guinea-pigs during pregnancy indicate that the embryo suffers in greater proportion than the mother when the supply of nourishment is insufficient. It should, however, be borne in mind that the *apparent* condition of health of the fœtus at the time of birth is often most deceptive. For instance, the offspring of alcoholic parents are not infrequently large and apparently well nourished and yet their subsequent history proves that they possess little inherent resistance to disease and that their satisfactory nourishment is a matter of the greatest difficulty. Until the relationship between the health of the mother and that of her offspring is more satisfactorily settled it would be safer—on the principle of BARRIE'S Thrums atheist who made a practice of attending regularly at church "in case, after all, there might be a God"—for all of us, whether we agree with Dr. ASHBY or not, to act as if we did.

The Control of the Sale of Potable Spirits.

WE are of opinion that there ought not to be any difficulty whatever in finding a perfectly clear and reasonable definition for every kind of spirit consumed by the public. Genuine brandy, whisky, and rum are not merely alcohol and the purchaser does not call for alcohol when he asks for any individual member of the series. If he did the *raison d'être* of the nomenclature in regard to spirits would disappear. By means of the terms brandy, whisky, rum, and gin these spirits are differentiated into alcoholic liquors produced from different materials, each exhibiting the specific flavour of the material employed. Moreover it is not only a matter of flavour, for most persons have sufficient intelligence to know why at one time they consider brandy more suitable than whisky or *vice versâ*. The point is that the terms whisky, brandy, rum, and gin have a special meaning and indicate practically the source of the spirit and certain representatives of the spirit trade must be brought to understand that this meaning cannot be stretched so as to include a spirit produced from any material. If the basis of all alcoholic beverages is to be plain alcohol, patent or silent spirit, then these differentiating terms may as well drop out of usage. The practice of attenuating genuine spirits with cheap silent spirit has been growing enormously during recent years and it is time that some effective control over the practice should be instituted. Although they may discount the value of analysis as it suits certain sections of the trade to do, they cannot blink the fact that analysis has disclosed to the public the existence of an appalling amount of fraudulent misrepresentation, sufficient, in fact, to call for rapid reform. In the case of brandy proceedings taken under the Sale of Food and Drugs Act have happily succeeded and the result has been a very violent shock to a certain section of the trade. In almost every public-house in the country notices are now posted to the effect that the brandy sold cannot be guaranteed to be entirely grape spirit. The retailer has, no doubt, received his instructions from those who "tie" his house. Good, so far, has been done, inasmuch as it is disclosed to the purchaser that the stuff which he buys has more than a suspicion cast upon it by the notice which is displayed by the seller. If only all purchasers would refuse to be served with any but the genuine article the business of those who approve and carry out the disclosure system would, we fancy, quickly diminish. It is quite obvious that the disclosure system is calculated to defeat the ends of the Sale of Food and Drugs Act unless the seller is compelled to stock the genuine article and to serve it when it is demanded. When a seller is forced to declare that the brandy which he sells cannot be guaranteed to be genuine brandy, the whisky genuine whisky, the rum genuine rum, and so on, surely it is near to the realisation of a *reductio ad absurdum*.

At Stockport last week an important case was heard in which two publicans were summoned for selling rum not of the nature, quality, or substance demanded inasmuch as it contained, according to the certificate of the analyst, between 70 and 80 per cent. of silent spirit. It was denied by the witnesses for the defence, who included scientific experts and sugar planters from Demerara, that the sample of spirit in question contained silent spirit. In fact, according to one witness, the suggestion was absurd. In the face of this another witness, a sugar planter, described in detail the manufacturing process and said that the product of the Coffey still was rum and nothing else but rum. Now, since the Coffey still produces nothing but silent spirit, it is difficult to understand why the bench dismissed the case. The Coffey still just as much robs rum and brandy of the characteristics which distinguish these spirits and which give them their peculiar individual properties as does the separator rob milk of its cream. Genuine rum is probably the most powerfully stimulating spirit that we possess and it is doubtless this fact, *inter alia*, which led to its use in the navy. Rum-and-milk, again, is admittedly one of the most powerful restoratives known, but the rum must not be merely alcohol of the degree of purity produced in the patent still. It must contain the full complement of ethers which rum produced from sugar or sugar residues in the pot still retains. Genuine pot-still rum undoubtedly owes its restorative properties to the very marked amount of ethers which it contains and therefore when a spirit is supplied showing a deficiency in the essential ingredients of rum it is not of the nature, quality, or substance demanded. The decision in the Stockport case is regrettable, for there is little doubt that rum is very extensively adulterated. Genuine rum should be a pot-still spirit produced from the fermentation of cane sugar or sugar residues. To qualify it even by such names as Demerara is inadmissible, unless it be clearly stated in addition that it is a patent as distinct from a pot-still spirit. That is the crux of the whole question, for if the trade would only adopt an honest label and would not shrink from printing upon it the truth about the spirit as to whether or not it were a pot-still spirit, there would be an end of the matter and its members would no longer have a chance of complaining of vexatious proceedings being taken against them.

The fact is that the introduction of the patent still brought with it a means of economically manufacturing relatively pure alcohol and the temptation to which so many have succumbed is to substitute this for genuine pot-still spirit to which designation brandy, whisky, and rum properly belong. This practice of substitution and of fraudulent misrepresentation in the spirit trade demands a serious system of control and it would appear that in its present form the Sale of Food and Drugs Act needs strengthening in order to deal effectually with this system of fraud. Nevertheless the Act has already revealed the existence of fraudulent practices, but undoubted assistance would be given to this important section of health administration if a court of reference could be formed to which all food and drink questions of this kind could be referred. It seems highly desirable also in the interests of the public health, as was only too well illustrated in the case of the contamination of beer by arsenic, that a special officer should be appointed by the Local Government Board to make inquiries into the processes of manufacture of foods and drinks in this country and also to obtain information so far as is possible concerning foods and drinks made and imported from abroad.

After the Holidays.

THE luggage-laden cabs and station omnibuses which as we write are by the score returning their weather-beaten occupants to the daily routine of workaday existence once again prompt the question, Do we derive such advantage from the holidays as these potential interludes of rest are capable of affording? It is perhaps rather for the individual than his medical adviser to decide whether from the point of view of enjoyment there is any commensurate return in exchanging the known comforts of the home for the problematical advantages of a feverish month's stay in a so-called health resort; but it is clearly for us, whose avowed aim it is as medical men to compass our own extinction by the conquest of disease, to consider whether these annual pilgrimages are conducted in the best possible manner to further our suicidal efforts. From one standpoint it is clear that these holidays, howsoever conducted, are genuinely advantageous, and this is that they afford an interval for recuperation to those overworked centres of the organic machinery on which the stress habitually falls. The premature shabbiness of the stair carpet if the tread is not changed at the annual spring cleanings and the want of smartness of the coat which is worn day after day without interruption offer homely but perhaps apt illustrations of the organic attrition which soon cripples the man who works too continuously in the same monotonous groove. Viewed from this economic standpoint the annual holiday must be regarded as little else than a wise precaution. The immediate fate, however, of the man who returns to town at the conclusion of his month or six weeks' holiday, sunburnt and "hard as nails," is so frequently unfortunate that it is quite justifiable to inquire whether there is wisdom in spending the holidays as they are usually spent, or whether by some carelessness or folly immediately on their conclusion we do not deprive ourselves of the advantage which we might otherwise have secured from them. In spite of our sunburnt and hard condition most of us within a week of our return take what, for want of a better term, is called a "chill." The manifestation of this inflammatory condition usually takes effect in the weakest organ and as often as not compels a temporary confinement to the house. The pathology of these chills presents a problem which the medical profession annually attempts to solve, but so little convincing have been our arguments that year after year we find ourselves mounting on the stepping-stones of our defeated explanations to new and more daring flights of pathological speculation. At one time we had almost convinced ourselves that the physical strain of that excessive athleticism which usually characterises the holiday season was the key which opened the door to the invasion of disease. At another time we had come to the conclusion that holidays spent in the relatively germ-free atmosphere of health resorts might deprive us of that immunity which the rich bacteria flora of London not only necessitates but imparts. Consequently when holiday-makers return to the metropolis deprived of the immune bodies, anti-toxins, and complements which it is their privilege as inhabitants of London to possess they fall easy victims to the very germs which in virtue of their usual immunity they can habitually resist.

We live, indeed, in an age of so-called physical culture and physical deterioration, but the cynic may be excused for questioning which were the greater evil—to live in harmony with our urban surroundings in a so called condition of physical unfitness, or sunburnt, "hard as nails," and in the pink of condition to pay the penalty of our physical superiority with a chill of the nature which we have described. According to our latest conviction the truth of the matter is somewhat as follows. There is one standard of physique which is suitable for urban conditions and another which meets the requirements of the country. The man on his holiday adapts himself to his new and more salubrious surroundings and rises to the occasion by the reacquisition of powers which belong not to the town. Again, on his return home at the end of, say, a month's holiday to the ordinary occupations of town life he descends from his platform of physical superiority and by stages, more or less sudden, sinks to the lower level which his normal environment enjoins. During the moments of his ignominious descent there is, as it were, an involution of organs and muscles, and this process following the general laws which govern all involuting organs or organisms imposes a lower standard of vitality and a feebler resistance to disease. It is then that the man catches cold. If these views be well founded it is quite clear what the invigorated citizen should do and what he should leave undone when he returns to the asphyxiating conditions of London life. He should bring himself by easy and gradual stages into harmony with his environment. All exercise should not be suddenly dropped as if it were something peculiar to rural life; fresh, or at least open, air is now even more important than before and the table habits of the country should be dropped for those which are physiologically adapted to a more or less sedentary life. The organism ever resents violent and sudden changes; great efforts at accommodation induce pain and illness. The man who returns from his holidays brings with him a body in which the vital activities are elevated in proportion to the amount of exercise that he has been able to take, the purity of the air which he has breathed, and the vigour of his appetite; but if he wishes to avoid the so-called chill which reduces his vitality at one fell swoop to an adequately humble level it behoves him to take his descent by easy stages and to guard against the follies which we have described; if he does this he will reap to the full the undoubted advantages which a judiciously spent holiday should and can afford.

Annotations.

"Ne quid nimis."

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

AT a recent inquest at Lambeth held by Mr. Troutbeck evidence was given by Dr. L. Freyberger who had held a post-mortem examination on the deceased but no other medical witness was called. The foreman of the jury drew attention to this, asking why there was no witness from the hospital to which the deceased had been taken who could have given the result of his observations

made immediately after death. Mr. Troutbeck's answer to this was that Dr. Freyberger was a pathologist and toxicologist appointed by the London County Council and that he "did not care to rely upon the evidence of a young hospital house surgeon, who perhaps was only just qualified." In answer to a question as to whether the expense to the rates was increased by the course which he adopted in summoning Dr. Freyberger, the coroner answered that no extra expense was involved and that even if it was it had nothing to do with the inquiry. The jury upon this occasion appear to have evinced a timely curiosity as to Mr. Troutbeck's methods and were no doubt puzzled to know why post-mortem examination alone should be relied upon in adducing medical evidence at an inquest to the exclusion of observations made and opinions formed before or immediately after death. There is no need to dwell upon the value of such evidence or to point out that where it is obtainable it may corroborate or may correct the evidence derived from the necropsy or may supplement it in matters of detail of an important character. There are points material to the coroner's inquiry which cannot be determined, and are not likely even to be suggested, by the medical man who only makes a post-mortem examination many hours after death has taken place. For example, where it is alleged that a medical man was summoned either before or immediately after death took place only that medical man can corroborate such a statement by independent testimony. Should he not give evidence an important question as to whether there was neglect, possibly of a criminal character, may never be raised. Mr. Troutbeck's explanation as to fees is also open to observation. He does not increase the ratepayers' liability by employing Dr. Freyberger in a case where only post-mortem evidence can be given, because Dr. Freyberger's fee is the same as that which under the Coroners Act should be paid on such an occasion to a medical man practising in the district. Should, however, the evidence of the medical man called in at the time of death be obtained and the post-mortem examination be made not by him but by Dr. Freyberger or by some other medical man, an increase of fees payable would result. Mr. Troutbeck gave the jury at the Lambeth inquest the explanation that the newspaper discussion to which their foreman referred was "being carried on in some cases by persons interested in the question of fees," and to the extent to which this observation is true there is nothing whatever to be ashamed of. Medical men who under the Coroners Act have the right to be summoned as witnesses and to be paid the fees assigned for such services are perfectly entitled to complain if they are deprived of them. The question of the legality of Mr. Troutbeck's action, however, will not be satisfactorily disposed of until it is properly raised by calling the attention of the County Council's auditor to the matter. If that gentleman then passes the account for the fees his decision to do so can be called in question in the High Court of Justice. This remedy was discussed in a leading article in THE LANCET of Jan. 10th, 1903, p. 111, when an Irish case (R. *v.* Finlay, Irish Reports 11, Common Law 498) was cited as an authority for the view taken.

THE FORM IN WHICH PHOSPHORUS EXISTS IN FOODS.

THE importance of phosphorus as a "building" material in the body is well known; it is a constituent of the cells, of the nervous system, and of the bones. Considerable study has been directed during recent years as to the form in which phosphorus exists in various foods and it seems fairly certain that the element is almost exclusively associated with an organic group and is not present, as has been generally assumed, as mineral phosphate. At any rate, it is now established that the inorganic compounds of phosphorus are not assimilated to any appreciable extent and, therefore, they can be of little value to the body. Moreover, phosphates are rapidly excreted without apparently playing any important rôle in the nutritive processes. We know that in cell substance, as in nuclein and lecithin, the phosphorus is combined with the glyceryl group and this fact has led to the preparation of glycerophosphates, which in many cases have been administered with undoubtedly good results in cases of impaired nutrition. When food substances containing phosphorus are incinerated the phosphorus is found in the ash chiefly as phosphate of potassium. Recent research shows that the phosphorus exists in foods not in the form of an inorganic compound but of an organic compound. To take one example, it is stated that all the soluble phosphorus of wheat bran is of an organic nature—in the form, in fact, of a phosphoric acid of a hydrocarbon group. Shortly, the compound may be described as a magnesium calcium, potassium salt of a phospho-organic acid. The acid and its salts have already been identified in the pulses and in the potato. It is obvious that a great number of phospho-organic compounds may exist, since phosphates of many hydrocarbon groups are well known. The subject is clearly of importance in relation to the essentiality of the element in the dietary of the growing individual.

MULTIPLE NEURITIS WITHOUT DISTURBANCE OF SENSIBILITY.

IN cases of multiple neuritis motor symptoms almost invariably predominate and though sensory symptoms may be present in the early stages of the disease they disappear before the later stages of the illness have developed, so that the symptoms are subsequently purely or exclusively motor in character. In the *Journal of Nervous and Mental Disease* for August Dr. J. Abrahamson gives details of a case with some features of special interest both as regards symptoms and diagnosis. The patient was a woman, aged 34 years, whose illness began in February, 1903, with weakness in the legs. In March she had a slight attack of what was probably influenza with a slight pleurisy. She recovered from the illness but four weeks later she began to develop œdema of the face and extremities and had a single attack of vomiting and diarrhœa. Some local tenderness was felt in the legs along the outer sides. The weakness in the legs progressed and a few weeks later she complained of numbness of the hands and weakness of the thumbs. A noticeable degree of wasting ensued in the legs, with paræsthesia of the thighs, legs, and feet. She was slightly febrile during this time and suffered from frequent urination and diarrhœa but at the end of a fortnight the febrile condition subsided. Her illness was diagnosed at the time as influenza. On attempting to get up from her bed a condition of wrist-drop and of foot-drop was noticed, the latter being the more marked. The physicians in attendance called the condition neuritis with partial muscular paralysis. According to their statement no sensory disturbances were present. She felt at all times the slightest touch and she was able to distinguish pin-pricks and hot and cold applications. The deep reflexes were absent on both sides and there was some ataxia, chiefly on the right side. The heart was apparently normal, the muscles of the trunk were intact, and the abdominal reflexes were preserved. There was some wasting of the peronei muscles with reaction of degeneration but no fibrillary twitchings were observed. There were no changes in tactile or thermal sensibility of the limbs. The patient was treated with electricity and strychnine and improved rapidly and was soon able to

walk alone In view of the attack of œdema, diarrhœa, and vomiting, the febrile attack with slight pleurisy, and the *distinctively peripheral character of the paralysis which* followed, a diagnosis of multiple neuritis (following influenza) was made Careful inquiry negatived any metallic poisoning *such as the foot drop and the wrist drop might have suggested* In the discussion which followed the communication *of the above paper at the New York Neurological Society* Dr Bernard Sachs stated that he had found objective sensory *symptoms frequently* absent in the most pronounced and *indubitable cases of multiple neuritis* Dr Leszynsky agreed that in the later stages at any rate of the disease there were *no sensory symptoms whatever* What they had to deal with in this case was a purely motor neuritis, showing that the *affection was limited to the motor fibres of the spinal cord in their peripheral distribution*

THE MEDICO-PSYCHOLOGICAL ASSOCIATION

THE autumn meeting of the South Eastern Division will be held by the courtesy of Dr James Chambers at the Priory, Roehampton, S W (about half a mile from Barnes Station) on Thursday, Oct 6th The general meeting will be held at 2 45 P M after luncheon with Dr Chambers Among the items of the agenda are (3) to fix the place of the spring meeting which is to be held on April 27th 1905 and (5) to consider the report of the statistics committee as to the revision of the statistical tables Communications will be made by Dr F W Mott on the Morbid Changes in the Brain in Sleeping Sickness, by Dr F Graham Crookshank on the Management of Early and Ill defined Cases of Mental Disorder, and by Dr R Hunter Steen on Mental Disease with Exophthalmic Goitre If a sufficient number agree the members will dine together at the Café Monico, Piccadilly-circus, W , at 7 P M Further particulars may be obtained from the honorary secretary, Dr Arthur Norman Boycott, Herts County Asylum, Hill end St Albans

SALICYLIC ACID IN GINGER WINE

AN interesting and important case was tried recently before the Recorder of Belfast in reference to the preservation of ginger wine with salicylic acid The action was remarkable in many ways but its principal interest lay in the extraordinary divergence of the medical and the chemical evidence On the one hand, it was declared that salicylic acid was a dangerous drug especially when given to persons suffering from inflammation of the heart liver or kidneys, and that in such circumstances if its use was continued it might cause death One of the medical witnesses testified that in his own case it had been administered to him when suffering from rheumatic fever with the result that he had nearly died and he had never prescribed it since On the other hand a chemist said that he had taken as an experiment 15 grains of salicylic acid per diem for 18 days without the slightest evil effects , and a medical man said that it was not unusual *to give 120 grains in a day and that he had known* it to be taken in daily doses of from 60 to 90 grains without the slightest harm He had never known any injurious effects which could be attributed to salicylic acid and 300 and even 400, grains had been administered without any ill effects All the statements in books about its effects upon the heart and kidneys were owing to the use at the time they were written of the impure drug and these effects were due not to the acid but to the impurities at first associated with it while now, owing he said, to its being pure, there was no cardiac depression even after enormous doses, it was foolish to talk of salicylic acid being depressant (if it was pure) in any doses up to 120 grains a day In reply to the statement that ten grains of salicylic acid had been known to bring a man s pulse down ten beats a minute and that others had found it to affect the kidneys, a medical witness said, "these expressions of opinion could be manufactured about every known substance that could be taken into the system These discrepancies may be explained by differences in idiosyncrasy Again, in reference to the chemistry of ginger wine, it was alleged that it contained 12 2 per cent of alcohol, which was a sufficient preservative to prevent putrefaction for years if the wine was kept in clean bottles, properly corked without the aid of such a dangerous drug as salicylic acid, while, on the other hand, a chemist declared that it was absolutely necessary to have a preservative for ginger wine in order to make it keep for a reasonable time and that salicylic acid was a good preservative and in the proportion of 7 2 grains to the pint its addition would be quite harmless Further he stated that alcohol was not developed in ginger wine by fermentation but that proof spirit was added, this however, would not be sufficient as a preservative Salicylic acid prevented, he said decomposition of the wine but would not necessarily produce the same effect in the stomach and thus retard digestion He did not agree with Dr E H Starling s views that salicylic acid tended to retard digestion by preventing the action of the gastric juices

THE NATIONAL ASSOCIATION FOR THE FEEBLE-MINDED

IN a recent article we directed attention to the appointment of a Royal Commission for the purpose of reporting upon the treatment of mentally defective persons We must not forget to mention in this connexion the useful work which has been done by the National Association for the Feeble Minded and the National Union of Special Schools These organisations which are interdependent, represent an endeavour to deal with the problems of imbecility in a manner at once practical and scientific The former has already established several homes in different parts of England for the maintenance and training of the weak minded and is affiliated with other local institutions of the same character Its objects are to provide wherever desirable the means of earning a livelihood to house the incapable in permanent homes and to ascertain, if possible how far imbecility is due to preventable causes and thus to limit its extension *The association is assisted* in these efforts by a medical committee The National Union of Special Schools is mainly concerned with the education of children deficient in mental and physical stamina The number of cases dealt with by the association during the year ending March 31st, 1904, was 509, as compared with 455 in the year preceding Several members of the Royal Commission are also members of the association and the record of its operations can hardly fail to prove serviceable during the forthcoming inquiry

THE ACTION OF TURPENTINE AS AN ANTIDOTE TO PHOSPHORUS

TURPENTINE has for long been used as an apparently true antidote in cases of poisoning by phosphorus but its use for this purpose has been purely empirical and no satisfactory explanation has been forthcoming of its actual nullifying effect upon phosphorus Phosphorus readily dissolves in the oil but hitherto no chemical interaction between phosphorus and the turpentine has been observed It appears now, however, that a solution of phosphorus in turpentine when exposed to the air deposits a waxy substance which on analysis would seem to be a definite compound of phosphorus and turpentine Subsequently analysis led to the adoption of a definite formula which corresponds with a true terpene phosphite in which one atom of hydrogen in the phosphorous acid has been replaced by the terpene group $C_{10}H_{16}$ These results suggest that in employing turpentine as an

antidote to phosphorus the effect would be more rapid if an oxidising agent, such as peroxide of hydrogen or camphor peroxide, could be used in conjunction with it. It would be interesting further to investigate the action of sanitas oil on phosphorus, since this oil is a ready oxidiser and is prepared from turpentine. In view of the above results sanitas oil might easily prove to be a valuable antidote to phosphorus. Certain it is that the timely administration of turpentine in cases of phosphorus poisoning has resulted in recovery It has been said that not all kinds of turpentine are effective, which may be due to the fact that some kinds contain more oxygen than others.

CHRONIC INTERSTITIAL NEPHRITIS IN THE YOUNG.

CHRONIC interstitial nephritis in the young has been recently discussed in our columns.[1] The subject was treated from the standpoint of the physician and the question of the ocular changes in general was not considered. In the Royal London Ophthalmic Hospital Reports, Vol. XVI., Part 1, Mr. E. Nettleship has published a valuable paper on Renal Retinitis in Young Subjects and the Relative Frequency of Juvenile Interstitial Nephritis in the Two Sexes which may therefore be regarded as supplemental to the articles just mentioned. From various sources he has collected 80 cases of interstitial nephritis in patients not above the age of 21 years, including nine under his own care. In addition there were three cases in which the nephritis was associated with calculus in the kidney or bladder. 62 cases were known to be fatal and in 60 of these a necropsy was made. For purposes of comparison Mr. Nettleship examined the notes of 149 cases diagnosed as parenchymatous nephritis at the Hospital for Sick Children, Great Ormond-street. Out of the 80 cases of interstitial nephritis retinitis or multiple retinal hæmorrhage was observed in 31 and it also occurred in two out of the three cases associated with calculus. In ten the eyes were examined and found to be normal. In the remaining cases no ophthalmological examination appears to have been made. Out of the 149 cases of parenchymatous nephritis definite retinitis was found in seven and doubtful appearances, such as slight haziness of the discs, in several others. In about 43 cases the eyes were examined and found to be normal and in the remaining cases no examination appears to have been made. Out of the 40 cases of retinitis in both groups the number in which the eye changes were severe was greater than in any similar consecutive number of cases in adults. Both retinæ were detached in three cases, abundant hæmorrhage was a feature of two or three, and exudation and swelling were excessive in three or four others. But it must not be considered proved that the ocular changes in children are more severe than in adults, for, perhaps, mild degrees of retinitis causing little interference with sight would have been discovered in more of the children had a routine ophthalmoscopic examination been made. The same remark applies to the apparent infrequency of retinal changes in parenchymatous as compared with interstitial nephritis. The ophthalmoscope was used much less frequently in the former cases. The earliest age at which renal retinitis has been recorded is five years (in a girl). In the 40 cases (interstitial and parenchymatous) the ages of two patients was seven years; of three, eight years; of two, nine years; of three, ten years; of two, 11 years; and of five, 12 years. Of the 40 patients suffering from retinitis 24 died at a known period after the retinitis was discovered. The interval was three and a half years in one case, between 12 and 15 months in four cases, between four and seven months in three cases, and less than four months in 16 cases. Hence the prognosis of chronic renal disease with retinal changes in the young is not less grave, perhaps more grave, than in adults. Chronic renal disease below the age of 21 years was found to be commoner in females than males, the reverse of the rule in adults. The females amounted to 64 and the males to 36 per cent. of the total. In interstitial nephritis the preponderence of females was still greater (70 per cent.). In parenchymatous nephritis, on the contrary, the males were slightly in excess of the females. But in the parenchymatous nephritis of adults the excess is much greater (according to Dickinson more than twice as many cases occur in males than females). As to the causation of interstitial nephritis in the young Mr. Nettleship finds that out of 45 cases in which the previous history was complete scarlet fever occurred before the onset of the renal symptoms in 16, the interval never being less than two years and often much more. In at least six cases scarlet fever was definitely denied. Measles, either alone or in conjunction with chicken-pox, seemed to be the most probable cause in eight cases. In two cases there was a history of chronic infantile eczema; in two of severe infantile diarrhœa; and in one or two of rickets with subsequent arrest of growth and failure of intelligence. In three there was a history of stone in the kidney and bladder. In three cases alcohol presumably was the cause, two of the patients being lads who drank heavily and one a barmaid who owned to taking "neat" brandy before breakfast. Hereditary syphilis was proved in six cases and was highly probable in several others. It was also certainly the cause in four of the parenchymatous cases. Thus the specific fevers accounted for about three-fourths of the interstitial cases. They were evidently the cause of one-third of the parenchymatous cases but this proportion was probably only a fraction of the true one.

[1] THE LANCET, July 23rd, p. 217, and August 20th, p. 556.

"SILENT SPIRIT" IN BRANDY.

A MAN was summoned at the Manchester Police-court on Sept. 20th for selling brandy containing not less than 25 per cent. volume of spirit, "not being brandy derived from wine." Mr. Charles Estcourt, the city analyst, contended that the whole of the spirit in the brandy should be derived from wine. The defence set up amounted, in fact, to saying that a great deal of the brandy which came into the country contained "silent spirit," and that such brandy was sold honestly, which, of course, means that this substitution or addition of something which is not brandy, but is called brandy, is very prevalent. Thus vice is justified because there is so much of it. As this was the first case of the kind in Manchester and the offence was not denied the magistrates "as a warning to others"—no doubt calculated to strike terror in the offenders—imposed a fine of 10s. and costs.

DEATH CERTIFICATES SIGNED BY AN UNQUALIFIED PERSON.

A VERY serious case of wrongful death certification was recently dealt with by the magistrates at Dale-street, Liverpool. A man named John Dale Tucker pleaded guilty to an offence under the second section of the Births and Deaths Registration Act, 1874, but the facts disclosed by the statement of the clerk to the West Derby union, who prosecuted, went further than the signing of certificates of death by an unqualified person. The defendant had in the two instances charged against him signed certificates in the name of a qualified medical practitioner formerly practising in another county but then abroad, and many other certificates similarly signed had been received and presumably accepted by the registrars of North and South Everton. The defendant, according to the statement of his solicitor, claimed to have obtained the degree of M.D.

of Pennsylvania, U S A , and since 1876 appears to have carried on unqualified practice in England, sometimes acting as locum tenent or assistant to medical men, with the exception of a period from 1879 to 1891 when he was suffering from blindness He was also alleged to have entered into negotiations with Mr Henry Gould, whose name he used for the certificates with a view to partnership In the circumstances the fines of £10 with £3 costs inflicted in the two cases in which he pleaded guilty constituted a lenient manner of dealing with his misdeeds The case shows how inefficient and untrustworthy the existing system of death certification and registration must be for any of the purposes which death certification and registration are intended to fulfil

THE USE OF BORAX AND BORIC ACID AS FOOD PRESERVATIVES

BORAX and boric acid are now so largely used as so called "food preservatives" that the question of the occurrence of illness in the form of catarrh of the stomach, nausea, and anorexia due to the preservative has been repeatedly forced upon the notice of physicians in the last few years Dr Charles Harrington, assistant professor of hygiene at the Harvard University, has published in the *American Journal of the Medical Sciences* for September an account of his experiments and observations on the extent to which such "preservation" of food prevails and the effects produced in the consumers of such foods, and in our issue of Sept 17th, 1844, we referred to certain experiments made by him as to the production of nephritis in cats by feeding with borax We refer to the subject again on account of Dr Harrington having found that both borax and its derivative boric acid are very widely used in the United States, these substances being almost invariably present in small quantities in butter, milk, oleomargarine, and some forms of cheese Clams and oysters, he says, are treated similarly to prevent putrefaction, while powdered boric acid is "dusted" over meat and fish to prevent them from undergoing "shining" of the surface Solutions of boric acid are also used for injection into ham pork, corned beef and other meat provisions, and he has never failed to meet with considerable traces of boric acid in all canned meats and meat foods An account of the use of borax and boric acid as food preservatives and of the physiological limits of their use was given in an annotation in THE LANCET of April 19th, 1902, p 1129 Dr Harrington states that the physiological limit is often exceeded by the manufacturers of canned and other meat goods, so that many of the foods enumerated contain an excessive amount of boric acid which is thus deleterious to health Boric acid not only arrests the decomposition of the meat and other food into which it is injected but increases the water retaining capacity and consequently the weight of the same His own analyses confirmed the results obtained by Polenske (1900), who found borax or boric acid to the extent of more than 1 per cent in every one of 51 specimens of American pressed beef It has been pleaded by those who sell provisions that the meat is only dusted over with the powder which can be readily wiped or washed off and that it is not absorbed into the meat Dr Harrington shows, on the contrary, by experiment and chemical analysis that boric acid is absorbed by the meat and that "once established in the tissues it cannot be soaked out or even boiled out This fact has also been confirmed by Heinze The addition of from 0 1 to 0 2 per cent of boric acid to milk, though seemingly insignificant, is equal to from 15 to 30 grains per quart Such a proportion of the substance taken in milk is sufficient to produce diarrhœa and nausea, says Dr Harrington Corned beef has been found to contain as much as 18 grammes of boric acid per pound, hams have on analysis been found to contain the same amount, while sausages contained four grammes per pound Oysters generally have been found to contain about one gramme of boric acid to the pint These are certainly to be regarded, says Dr Harrington, as excessive quantities "An oyster stew made with a pint of such milk and a quarter of a pint of such oysters, followed by a quarter of a pound of such beef or ham, would not constitute an excessive meal for an average man who would ingest therewith upwards of seven grammes of boric acid, an amount which in the course of the day's food might easily be doubled" Dr Harrington concludes that the attention of the legislature should be drawn, and minimum limits fixed, to the use of these food preservatives

THE THERAPEUTIC VALUE OF SUPRARENAL GLAND PRODUCTS

IN a paper with the above title read before the Therapeutical Society Dr J Gray Duncanson gives his experience of the uses of adrenalin and suprarenal extracts in general practice After a brief *résumé* of the physiological effects of suprarenal extract as described by Schäfer and Oliver he enumerates the principal preparations on the market and gives his results of determinations of their reducing power to Fehling's solution, which he regards, following Aldrich as a measure of the quantity of active principle contained in them He has used the various preparations locally in a variety of conditions, for most of which the value of the drug is well established, among others in nasal and aural diseases and in epistaxis and other forms of hæmorrhage He has also found it of great use locally in catheterisation, in the pain and strangury of acute gonorrhœa, and in the hæmaturia due to enlarged prostate He has given it internally in many conditions and records a case of malaria with hæmoglobinuria in which benefit was observed as a result, although the patient eventually died In hæmoptysis he found that its use was not beneficial This is hardly to be wondered at, since many local styptics which act by contracting the vessels when given internally naturally tend to increase the hæmorrhage by raising the blood pressure That suprarenal extract and the various preparations derived from it are of great use in a variety of conditions is very generally admitted but Dr Duncanson is perhaps a little optimistic in his views He does not refer to the temporary nature of its action or to the dilatation of the vessels which may follow its use He states that it never fails in epistaxis, for which condition he packs the nasal cavities with double cyanide gauze damped with adrenalin solution

THE CONDENSATION OF GASES BY CHARCOAL.

IN these days when attention seems to be riveted so strongly on remarkable atoms of the radium order the atoms possessing apparently less pretentious properties are in danger of being neglected Years and years ago the announcement that the now relatively uninteresting element carbon was a powerful absorbent of gases was received with the greatest interest and the discovery proved of some practical importance Owing to this remarkable property charcoal was used as a deodorant, as a purifier of water, and as a purifier also of air in the form of a respirator There is more in this remarkable property than first meets the eye, for this power of occluding gases shown by charcoal and coke has been further studied with interesting results which promise to help in the elucidation of the nature of recently discovered elements Wood carbon absorbs large quantities of gases at extremely low temperatures and can be used, therefore, to produce very

high vacua. Indeed, by plunging charcoal into liquid hydrogen the vacuum obtained owing to condensation of the hydrogen within the pores of the charcoal became so high that no electric discharge will pass. In a similar experiment in which helium was substituted for hydrogen the vacuum was so high that a coil giving a four centimetre spark in air had to be used before a phosphorescent discharge could be obtained, and then the spectrum shown was due to glass. Carbon clearly, therefore, has a marked selective action for helium and the experiment suggests that this element may prove to be a valuable "finder" of helium in gases, and possibly of other gases not yet known to us. It is not a little curious that this occluding property of carbon which has been known for a very long time has not been tried before in the search after rare gases. Even coke occludes gases in surprisingly large quantities and further shows a selective action in this respect. Thus coke will completely absorb the oxygen from the air, leaving pure nitrogen, a residue of nitrogen, however, being found in the porous substance but no oxygen. It is probable that in this case, therefore, the oxygen has combined with the hydrogen of the coke to form water as there was no evidence of any carbon being oxidised. Further experiments with the occluding property of charcoal in connexion with the quest after new gaseous elements and the determination of the properties of those already discovered will be looked forward to with considerable interest.

SEIZURE AND CONDEMNATION OF TUBERCULOUS MEAT.

IN the report of the Select Committee of the House of Commons on the Tuberculosis (Animals) Compensation Bill, 1904, reference was made (*a*) to the variety of practice alleged to exist with regard to the amount of tuberculous deposit the existence of which in a carcass is held to justify its total condemnation; and (*b*) to complaints made by butchers as to the injury caused to them by their prosecution in open court for having tuberculous meat upon their premises. A circular has been issued by the Local Government Board drawing attention to these two points and making suggestions as to the course which should be pursued by the meat inspectors. The members of the Royal Commission (1898) were of opinion that the entire carcass and all the organs of an animal should be seized under the following conditions: (*a*) when there is miliary tuberculosis of both lungs; (*b*) when tuberculous lesions are present in the pleura and peritoneum; (*c*) when tuberculous lesions are present in the muscular system or in the lymphatic glands imbedded in or between the muscles; and (*d*) when tuberculous lesions exist in any part of an emaciated carcass. The Commission further suggested that the carcass if otherwise healthy should not be condemned but every part of it containing tuberculous lesions should be seized (*a*) when the lesions are confined to the lungs and the thoracic lymphatic glands; (*b*) when the lesions are confined to the liver; (*c*) when the lesions are confined to the pharyngeal lymphatic glands; and (*d*) when the lesions are confined to any combination of the foregoing but are collectively small in extent. The Local Government Board, after a full consideration of these recommendations, came to the conclusion that measures more stringent than those advocated by the Royal Commission are not called for. This decision is a perfectly right one, especially as the subject of bovine tuberculosis is at present being investigated by another Commission. The Board has, however, acted wisely in insisting upon the expediency and desirability of compelling those officers who are employed as meat inspectors to act in direct accordance with the principles thus laid down if any slackness in this respect exists. With regard to the prosecution of butchers the Select Committee expresses the view that if a butcher who is in possession of tuberculous meat has notified the fact to the proper authority as soon as he could be reasonably expected to be aware of it the case should not be taken into court. This decision is also a wise and just one, for serious consequences may result to the business of a butcher from prosecution in open court for being in possession of tuberculous meat. If, however, such possession is voluntarily and promptly disclosed by the owner the carcass or its parts can be destroyed and so the necessary protection to the public can be satisfactorily assured without any further legal proceedings.

THE first meeting of the forty-ninth session of the West Kent Medico-Chirurgical Society will be held at the Royal Kent Dispensary, Greenwich-road, S.E., at 8.45 P.M., on Friday, Oct. 7th. The President, Dr. Robert E. Scholefield, will occupy the chair. After the formal business a clinical evening will be held, when cases and apparatus will be shown by Dr. F. S. Toogood, Dr. M. Dockrell, Dr. L. L. B. Williams, and Dr. G. Herschell.

THE opening meeting of the twenty-third session of the West London Medico-Chirurgical Society will be held at the West London Hospital on Friday, Oct. 7th, at 8.30 P.M. The presidential address will be delivered by Mr. C. M. Tuke, the subject being "Progress in Psychology."

THE annual dinner of the Association of Public Vaccinators of England and Wales will be held at the Hotel Cecil, Strand, London, W.C., on Friday, Oct. 28th, at 7 P.M. All communications should be addressed to Mr. Charles Greenwood, 1, Mitre-court-buildings, Temple, E.C.

IT is announced that the boatswain of the London steamer *Bishopsgate*, now at Jarrow-on-Tyne, is suffering from plague and has been removed to the floating hospital for infectious diseases. The *Bishopsgate* has come from Rosario, South America, calling at Hamburg.

WE regret to announce that Professor Finsen of Copenhagen died on Sept. 25th in his forty-third year. It will be remembered that the Nobel prize was awarded to him about a year ago. We hope to publish an obituary notice at an early date.

A MEETING of the East London Medical Society will be held on Tuesday, Oct. 4th, at 3.30 P.M., in King's Assembly Rooms, Cottage-grove, Mile End-road, near Burdett-road, E.

AT St. Thomas's Hospital Medical School the entrance scholarship in natural science, of the value of £150, has been awarded to Mr. Ernest William Witney, and the University scholarship, of the value of £50, to Mr. Charles Ernest Whitehead, B.A., of Caius College, Cambridge.

HEALTH OF DEVONPORT.—The medical officer of health of Devonport (Mr. J. May) in his annual report for 1903, which has just been issued, states that during the year the births numbered 2055, giving a birth-rate of 23·7 per 1000. The number of deaths was 1055, equal to a death-rate of 14·2 per 1000. The average birth-rate and death-rate for the preceding 10 years were 26·8 and 16 per 1000 respectively. Mr. May adds that hitherto all the sewage has been allowed to flow untreated into the river Hamoaze. This is now prohibited by the Admiralty and the drainage of the suburbs of Devonport will have to be treated specially so that none but a clear effluent shall be discharged into the Hamoaze.

THE EVOLUTION OF MAN'S DIET.

By HARRY CAMPBELL, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE NORTH-WEST LONDON HOSPITAL AND TO THE HOSPITAL FOR NERVOUS DISEASES, WIMPOLE STREET.

IV.[1]

HAVING now completed our general survey of the various diet epochs we may proceed to treat of each in detail.

THE ANTHROPOID PERIOD.

The anthropoid period began with our generalised anthropoid precursor, as represented by some such being as the extinct dryopithecus with a cranial capacity of 3 or under, and it continued till the appearance of that anthropoid precursor which stood at the same level as the present-day great apes now stand, with a cranial capacity of 5, or somewhat less. The food of our anthropoid precursors was probably much the same as that of the existing anthropoids, and in order to ascertain what it was we must therefore inquire into the diet of the apes. We may also gain some help in this direction by studying the diet of the remaining primates, or "monkeys," as some term them, in contradistinction to the "great apes." But before entering on this inquiry let us consider the factors which determine the food of animal species.

Factors determining the food of animal species.—We find these to be three in number: 1. The kind of food available—i.e., the nature of the flora and fauna where the species is located. 2. The desire or prompting for certain foods; while this varies with every species it will be found that all animals in their choice of foods are influenced, consciously or unconsciously, by three considerations: the degree of concentration of the food, its digestibility, and its taste, the tendency of every animal being to seek out food in as concentrated, digestible, and palatable a form as possible; a concentrated and easily digestible food has the great advantage that it can be procured and assimilated with the minimum expenditure of energy. Of vegetable foods seeds and roots are the most concentrated, but of all natural foods animal tissue is at once the most easily digested and the most concentrated, and given the necessary facilities even herbivorous species tend to become carnivorous, while the reverse, so far as I know, never occurs. In winter the reindeer eats flesh and in seasons of dearth farmers have been known to feed their cattle and even their horses on fish, but the carnivora cannot digest vegetable food unless it is artificially prepared. All the carnivorous mammals were originally vegetable feeders. In regard to the palatableness of any given food this, of course, varies with different species; what may be highly palatable to one may excite disgust in another; there may be species which revel in bitter and sour foods such as aloes and sloes but probably the tendency of all the mammals, certainly of the higher ones, is to avoid bitter and sour-tasting foods in favour of those that are sweet or possessed of delicate flavours. Within limits sourness is tolerated even by man who sometimes manifests an actual craving for sour things, such as lemons. One of the chimpanzees at the London Zoological Gardens is very partial to this fruit and there can be little doubt that in their natural state the anthropoids subsist largely on bitter and acrid substances from which the human palate would recoil in disgust. Nevertheless, the tendency is probably in the direction indicated. 3. The degree to which the skill needful to procure the desired food is possessed by the species. Obviously the greater the intelligence and the better the physical equipment needful for securing a food—e.g., that needed for climbing a tree or grasping an object—the more successful is the animal likely to be in obtaining it. Among the rodents the stupid rabbit, unable to climb and with little prehensile power, has to be content with a bulky diet of comparatively innutritious herbs, while the more intelligent squirrel, a nimble climber and possessed of considerable prehensile power, is able to procure highly nutritious seeds and not a little animal food. The intelligence and nimbleness of rats, again, enable them to procure highly concentrated and palatable foods; they haunt the abodes of man and pillage the food, animal as well as vegetable, which he has stored for his own use.

All changes which the diet of our ancestors has undergone since pre-anthropoid times are to be explained by reference to these three factors. We shall see that the food of the great apes and the monkeys is for the most part concentrated, consisting of the more concentrated vegetable foods and of that most concentrated of all food—animal tissue. The facts that many of the monkeys are provided with a large cæcum and that all the great apes possess a vermiform appendix, indicating their descent from ancestors possessing a very capacious cæcum, show that both the apes and the monkeys are derived from beings whose diet was more bulky than is their own. Evidently with the advance in intelligence and dexterity the evolving primate gradually abandoned a herbivorous for the more concentrated frugivorous diet, becoming also an animal feeder. That monkeys and apes, in spite of their great intelligence, are not more carnivorous than they are is probably to be explained by the facts that they are essentially arboreal in their habits and are not endowed with the necessary physical equipments for securing an abundance of animal food. I have already insisted that it was not until our ancestors had learnt to fashion weapons and traps that they were enabled to secure a plentiful supply of animal food.

Coming now to the food of the primates it is to be observed that zoologists include under this order the lemur-like animals (Lemuroidea) and the man-like animals (Anthropoidea).[2] The true lemurs are by some not included among the primates, being termed by the Germans half-monkeys and by the French false monkeys; they show affinities to the insectivora. The anthropoidea include among others man, the great apes (gorilla, chimpanzee, orang, gibbon), the baboons, and—lowest branch of all—the marmosets, further below the great apes than the latter are below man. The reaction of the blood of the various members of this group affords, as E. H. F. Nuttall has so ably shown, a valuable means of determining their relative affinities to man.[3] This method of testing shows that the [illegible] that the group [illegible] e the lemuroids [illegible]

DIET OF THE MONKEYS (PRIMATES BELOW THE GREAT APES).

The *lemurs* proper eat fruits, birds' eggs, birds, mice, and insects, and one species is said to eat honey.

The *lemur-like animals* eat fruit, leaves, birds' eggs, small birds, reptiles, and insects. One of the best known of these creatures is the aye-aye, a native of Madagascar. Its food consists largely of the larvæ of a beetle; it drinks after the manner of many monkeys—by dipping the fingers into the water and drawing them through the mouth; it is said by some to eat honey.

Marmosets, the lowest anthropoids and the most nearly allied to the lemuroids, subsist on insects and fruits, not disdaining flesh, including fish.

Baboons (11 species) are omnivorous. Their food consists principally of insects, which they search for under stones, turning the latter over with their hands, larvæ of beetles, caterpillars, lizards, eggs, nestlings, mice, fruits, and roots; in South Africa they will rip open lambs to get the milk out of the stomach and will pelt an enemy with stones. The Doquera baboon goes about in large herds; these animals hunt their prey, chiefly small ruminants, like a pack of hounds, following the quarry till it is exhausted. The chacma, the largest of all the baboons, subsists on scorpions, centipedes, and all manner of insects, birds' eggs, gum and honey, and the bulbous roots of certain liliaceous plants, in the procuring of which it often displays considerable ingenuity. Le Vaillant's pet chacma would lay hold of a tuft of leaves with its teeth and pressing its four paws firmly against the earth and drawing its head backwards the root generally followed; when this did not succeed it seized the tuft as before as close to the earth as it could, then throwing its heels over its head the root yielded to the jerk it gave it. The Anubis baboon digs up the roots of grasses. The Arabian baboon lives chiefly on insects and such creatures as it finds under stones or among rocky cliffs and ravines. The Gelada baboons are known to roll down

[1] Nos. I., II., and III. were published in THE LANCET of Sept. 10th, (p. 781), 17th (p. 848), and 24th (p. 909), 1904, respectively.

[2] It should be noted that the term "anthropoid" is by many confined to "the great apes," and it is in this sense that I have used it in these papers.

[3] Blood Immunity and Blood Relationships, &c.

stones upon their enemies from the rocky cliffs where they frequently congregate, also to hurl stones.

The *macaques* (of which there are 17 species) have teeth adapted to crush and to open hard-shelled fruit. Most, if not all, species eat insects, seeds, fruits, and they have been known to devour lizards and frogs. One species subsists chiefly on crustacea. All have the habit of cramming food into their cheek pouches for mastication at leisure. The Barbary macaque eats grass very readily and is very destructive to cultivated fields. The Formosan rock macaque lives on berries, tender shoots of plants, grasshoppers, crustacea, and mollusca. The crab-eating macaque feeds on seeds, insects, and crustacea: it may be seen wading about the swamps searching for crabs and shrimps and it can swim and dive well. The claws and body of a crab were found in the cheek pouches of a female that had been shot.

The *mangabeys* (six species) subsist chiefly on fruits.

The food of the *guenons* (40 species) consists of fruits, birds' eggs, and honey; they are very destructive to the grain fields of the natives and are said to repel intruders with missiles. One species is very partial to the gum which exudes from various kinds of acacia. Syke's guenon readily ate meat and would choose to pick a bone even when plentifully supplied with vegetables and dried fruit. The Patas guenon in its native forests lives in large troops which unite together against a common enemy, and they throw stones, branches of trees, and other objects at their aggressors.

The *guerezas* (nine species) and *langurs* (23 species) are provided with a large sacculated stomach and subsist for the most part on vegetable food, chiefly leaves, young shoots, and fruits; some are said to devour insects. Of one species of langur we read that two communities will often enter into deadly combat for possession of a fruit grove.

Summarising our knowledge of the diet of the monkeys we may say that while it is in the main vegetable it is also partly animal. The lemurs which, as shown by the blood tests, are farthest removed from man, are the most carnivorous, while the guerezas and langurs are the most vegetarian. The animal food includes birds, birds' eggs, mice, lizards, frogs, shell-fish, grubs, scorpions, centipedes, and insects. Honey is devoured by some of the lemurs, baboons, and guenons, and gum by baboons and probably many other monkeys. The vegetable foods include fruits, seeds, roots, tender shoots, and leaves. All the monkeys appear to rob plantations when they get the chance. The fact that baboons are known to dig up roots and search under stones for insects and grubs is of interest as showing what a high degree of intelligence they bring to bear on the food quest, and suggests that man's precursors early began to use their hands in these ways. It is also worthy of note that several varieties of monkeys employ stones and other missiles against their enemies; baboons hurl and roll down stones; guenons repel intruders with stones and branches of trees; there is even evidence that pitched battles may take place among certain species of langurs for the possession of feeding grounds.

FOOD OF THE GREAT APES.

The food of the great apes being almost certainly of the same kind as that on which our own anthropoid precursors subsisted, it is deserving of the closest study. Unfortunately we know very little of the habits, dietetic or other, of these animals under natural conditions and have to rely mainly upon a study of them in captivity.

The orang.—This ape is thought by some to be entirely vegetarian; at all events there does not appear to be any evidence that it destroys living animals, but Weyers has known an orang in captivity to relish fish, meat, fowls, eggs, and live grasshoppers which it appeared to appreciate greatly. Under natural conditions it includes among its vegetable foods the durian, rambutan, and mangosteen. According to Wallace the orang is frugivorous, living chiefly on fruits, many of which are intensely bitter, and more rarely on shoots and tender leaves. Salomon Müller also regards this ape as exclusively vegetarian. In its search for food it has to wander, and when a favourite fruit is ripe it is to be seen in the region where the fruit grows; hence it is found in the South of Borneo in April and May when the fruit of the ficus infectoria is ripe. Besides fruit the orang's food, according to Müller, is composed of buds, flowers, and young leaves. The stomach of an old male that had been shot contained strips of mucilaginous bark from one to two feet long, as well as some white grains of sandoricum Indicum *intact*, "without a trace of having been masticated." According to the Dyaks the wild orang rarely takes animal food, and Müller's experience of the tame animal bears out this view. "We have offered him fowls and other live birds and meat without his touching it." Brehm says that the tame orang does not like insects, and he records of one of them that having killed a sparrow it plucked its feathers, took a bite of the flesh, and rejected it with disgust. Dupont refers to another similar case, adding that its keeper told him that he had observed among other anthropoids a strong liking for birds before they had acquired their feathers and an indifference to them after they were fledged. Weyers asserts that during the season the orang subsists almost entirely on fruits, especially the durian; some Malay families subsist exclusively on this fruit during the season. The orang has been observed to crouch down at the water's edge and to imbibe the liquid by suction. When pursued it will pelt its aggressors with broken branches and the thick, thorny outer husk of the durian fruit.

The gorilla.—Very little is known of the habits of this animal in the wild state. Du Chaillu maintains that it is exclusively frugivorous and asserts that he never found anything but vegetable food in the stomach of those he "had had the good luck" to shoot. On the other hand, Famelart, who lived 12 years in Africa, asserts that he has seen both the gorilla and the chimpanzee eat eggs, young birds, rodents, and insects and that they will devour young birds without plucking the feathers. Hartmann gives a list of fruits on which the gorilla subsists, many of which the natives find quite inedible, mainly no doubt owing to the presence of a large admixture of cellulose and unpalatable ingredients. Koppenfels watched a gorilla family consisting of the parents and two young ones; the female climbed up a wild mango tree and shook down the fruit. On another occasion he saw a male, female, and two young ones when they were feeding: "The head of the family remained at his ease, while his wife and children plucked fruits for him from a small tree which stood by, and if they were not sufficiently nimble, or if they took too large a share for themselves, the old gorilla growled furiously and inflicted a box on the ear." Gorillas rob the cane plantations and rice fields of the negroes. They are said to devour the bodies of animals killed in hunting and even those of men. "Like most species of apes, the gorilla preys upon the smaller mammals, upon birds and their eggs, and upon reptiles. The gorillas which have been kept in confinement in Berlin have been quite omnivorous and have displayed a special taste for animal food" (Hartmann). Falkenstein is convinced that the gorilla is by nature a hunter and carnivorous. His gorilla was accustomed to "eat anything."

The gibbons.—Owing to the great timidity of these animals it is very difficult to study their natural food and authorities are somewhat contradictory as to what it consists of. Weyers has seen wild gibbons eating insects, larvæ, ants' eggs, birds' eggs, and fledglings. Bennet's tame gibbon would seize and greedily devour a live lizard, and snakes of considerable size are said to be torn in pieces by them. Another tame gibbon would search the house most diligently for spiders. They catch birds with wonderful precision and sometimes devour them, though Martin mentions the case of a gibbon which having caught a bird contented itself with plucking its feathers. This authority also tells of a tame gibbon which refused all kinds of animal food and of another which besides vegetable food subsisted on milk and eggs. The wild gibbon is known to eat several varieties of fruit and leaves; it appears to be especially fond of green vegetable food. The gibbons at the London Zoological Gardens are very partial to lettuce.

The chimpanzee.—Buffon's chimpanzee ate the ordinary food of man, including meat, but preferred fruit. Chimpanzees are said to wander about in search of fresh feeding grounds.

The keeper in charge of the big apes at the London Zoological Gardens regards them as almost entirely vegetable feeders. Speaking from an experience of 20 years, during which time he has had under his charge a number of chimpanzees, gibbons, and orangs as well as two gorillas, he informs me that they have rarely shown a liking for animal food. It should be noted, however, that the vegetable food he gives them is much more delicate and appetising than that which they could secure in the natural state, consisting as it does of cultivated fruits such as oranges, lemons, and bananas, and including boiled

farinaceous food such as rice; further, that they are always supplied with a sufficiency of it and are never permitted to feel the sharp pinch of hunger. With an abundance of such delicate and appetising vegetable food at their disposal it is hardly surprising that they should show little liking for raw animal food. Dupont maintains that the great apes are, in the natural state, essentially frugivorous, and lays stress on the fact that animal food has never been found in the stomach of one that has been shot in its native forest. He acknowledges, however, that in captivity they learn to eat much the same kind of food as civilised man, and he points out that no animal below man takes so readily to artificially prepared food as the great apes, a proof, he thinks, of the affinities between him and them. "What has struck me," writes Weyers, "in observing monkeys in captivity, is the preference they show for the cooked foods over raw foods. They eagerly devour cooked rice, vegetables, fish, beef, chickens, the bones of which they carefully pick and then break in order to extract the last particle of marrow."

From an examination of the teeth of anthropoid skulls in the admirable collection in the Hunterian Museum of the Royal College of Surgeons of England, I should judge the orang and the chimpanzee to be more frugivorous than the gorilla. Of ten gorilla skulls examined, in only one—that of an old female—are the teeth greatly worn, though in that one so greatly that the dentinal canals of the incisors are actually exposed. It is true that most of the other gorilla skulls appear to belong to young adults but their teeth are surprisingly little worn. Their condition suggests that their owners must have subsisted largely on animal foods and that the aged female, being less successful in procuring these, was compelled to fall back on vegetable food which needed abundant mastication.

In striking contrast to the condition of the teeth of the gorilla is that of the teeth of the orang and chimpanzee; with scarcely an exception their teeth are much worn. Of 12 orang skulls examined, in only one quite young adult can the teeth be said not to be worn; in two or three older, *but still quite young adult skulls, they are decidedly worn*, while in one orang skull even the milk teeth are greatly worn. Nothing could better show that these animals must consume a large amount of vegetable food requiring abundant mastication. Of eight chimpanzee skulls examined, in only one (young adult) are the teeth not worn. In one of these skulls the dentinal canals of the incisors are exposed. The museum is not well supplied with gibbon skulls; the teeth of those I examined are not much worn; one is struck with their smallness as compared with the teeth of the other anthropoids. A word in passing concerning the teeth of the baboons. They appear to me to be of a much more carnivorous type than those of the great apes and to admit of very little lateral movement; those of the skulls examined are little worn, if at all.

Summarising now our knowledge of the diet of the great apes we may conclude that, as in the case of the monkeys, they are mainly frugivorous, meaning by this that their vegetable diet consists chiefly of the more concentrated vegetable varieties, but that they are also animal feeders. The gorilla is apparently the most carnivorous; the orang the most vegetarian. It seems likely that animal food is most eagerly sought after by the anthropoids when vegetable food is scarce; insects, grubs, vermin, lizards, snakes, rats, mice (and other small mammals), birds' eggs, and birds are then devoured. I have seen no mention of their consuming fish in their natural state, though one can well believe that they may do so upon occasion. Nor have I met with any evidence of their eating honey, but seeing that this valuable and toothsome food enters into the dietary of many monkeys which are much below the anthropoids in intelligence one can scarcely doubt that the latter indulge in it when opportunity offers. Gum is probably also eaten by them. Their vegetable food consists, as in the case of the monkeys, of seeds, fruits, young shoots and leaves, succulent barks, and possibly also of roots, though of this there is no direct evidence. One fact stands out prominently regarding the vegetable food of the anthropoids—namely, that much of it is from its coarseness and acridity unfit for human consumption, showing that the coarser and less tasty varieties have been gradually discarded by the evolving man as the means of procuring other kinds of food have increased. Koppenfels's observation on the part which the female gorillas and the young take in procuring vegetable food for the males is of great interest in view of the custom prevailing among all primitive peoples of relegating much of the work and most of the drudgery, including the collection of vegetable food, to the female section of the community. The statement that chimpanzees wander about in search of fresh feeding grounds is also of interest, as suggesting that our anthropoid precursors were not strictly stationary.

It will thus be seen that the diet of the primates below man—i.e., both of the monkeys and the great apes—is mainly vegetable and, further, that so far as these animals are vegetable feeders they are essentially frugivorous, as distinguished from herbivorous, their food consisting not, as in the case of the herbivora, essentially of grasses, leaves, and young shoots, which in order to provide a sufficiency of nutriment require to be consumed in large quantities, but of the more concentrated fruits and seeds; in short, the diet *of these primates, as of all highly intelligent animals, is a* concentrated one, cons[illegible] and to a less extent of [illegible]

Our study of the foo[illegible] draw the following deductions regarding that of our anthropoid precursors. The descendants of beings whose diet was largely herbivorous they themselves were in the main frugivorous, subsisting on the larger seeds and fruits, as well as on leaves and young shoots, probably also on roots (which were scratched or pulled up), gum, honey, and the bark of certain trees. Much of the vegetable food was dense and coarse from the large proportion of cellulose it contained, and disagreeable to the human palate from the presence of sour, bitter, and acrid principles. Much of it also, owing to its great denseness, demanded vigorous mastication in order to break up the cellulose framework, and this led to a considerable wearing down of the teeth, just as it does in existing anthropoids (with the exception, perhaps, of the gorilla) and to a considerable buccal digestion of the contained starch, most of it being converted within the mouth into dextrine and maltose and only a small fraction passing unaltered into the stomach. During this diet epoch, therefore, the amyolytic functions of the small intestines were not greatly called into requisition. Judging from what has been observed in the case of the gorilla we may assume that even at this early stage the lordly males allowed their wives to collect their vegetable food for them. The animal food consisted of grubs, caterpillars, ants, ants' eggs, snails, insects (e.g., spiders, grasshoppers), and the like, reptiles (e.g., lizards, snakes), birds, birds' eggs, the smaller mammals (e.g., rats and mice), possibly also shell-fish from the lakes and streams as well as occasional fish. Water was drunk either by suction or by dipping the hands into it and then licking them. There can be little doubt that these primal anthropoids employed stones and branches of trees against their aggressors, a practice which led the way in a later era to the fashioning of stone and wooden implements. They probably kept to within comparatively narrow limits, only changing their abode in search of new feeding grounds and not wandering long distances like the carnivora.

(To be continued.)

INFANTILE MORTALITY.

IN recent numbers[1] of THE LANCET we have drawn attention to some important revelations of the Duke of Devonshire's Committee on Physical Deterioration respecting the excessive waste of life which still persists among certain sections of our infant population. Year after year in reviewing the local statistics of mortality we have remarked on the danger of accepting a normal death-rate at all ages as proof of a satisfactory condition of the public health. Experience shows that by such means an excessive infantile mortality often escapes detection in the presence of a low general death-rate. From this point of view the committee seems to us to have done good service by emphasising the point, of which there is abundant evidence, that whilst sanitary administration has effected great saving of life at later ages the records of infantile mortality still remain a dark page in our national history.

That the public conscience as regards this subject is at

[1] See THE LANCET, August 6th, p. 300; August 20th, p. 557; and Sept. 10th, p. 735.

length aroused may be gathered from the fact that the *Times* has lately devoted several columns to a consideration of the sacrifice of child life which the committee's report shows to prevail in several parts of the country. The death-rate of any unhealthy district, if properly analysed, will show that it is among young children mainly that insanitary conditions produce the greatest havoc. Most of the infectious diseases that contribute so largely to the general death-rate are fatal chiefly at ages under the fifth year. The national returns indicate that among the most destructive infantile maladies measles, whooping-cough, and so-called "atrophy" are fatal at these ages to the extent of from 93 to 97 per cent. of the mortality thus caused at all ages, whilst diarrhœal diseases, as well as tuberculous affections of the brain and abdomen, are fatal then to the extent of from 70 to 72 per cent. of the respective totals.

It is to be regretted that in some health reports the deaths from diseases which are mainly incidental to particular ages, instead of being shown in terms of the population living at those ages, are still exhibited as a proportion of the entire population without distinction of age, thus obscuring the real issue, if not indeed leading to erroneous conclusions. We therefore note with satisfaction that in the last two reports of the Registrar-General the subject of infantile mortality has achieved a prominence to which it is fully entitled as the chief factor of the general death-rate. To the report for 1902, for example, Dr. John Tatham contributes a section on the causes of mortality among infants and young children which will repay perusal (see p. lxvii.). In order to provide a standard by which may be judged the mortality of any district whether in town or in the country, Dr. Tatham has made two selections, one from among the urban counties and the other from among the rural counties of England, containing aggregate populations of 18,000,000 and 4,000,000 respectively, and for these areas he has calculated average death-rates in the last quinquennium: (1) among infants under one year in terms of registered births; and (2) among children under five years in terms of the living at that age.

The following tables are excerpts from the report above referred to:—

AVERAGES 1897–1901.

TABLE I.—*Deaths under One Year per 1000 Births.*

Causes of death.	Boys.		Girls.	
	Urban counties.	Rural counties.	Urban counties.	Rural counties.
All causes	186	142	155	113
Measles	4	2	3	2
Whooping cough	5	5	6	6
Diarrhœal diseases	43	22	39	18
Tuberculous diseases ...	9	5	7	4
Nervous diseases	24	21	19	16
Respiratory diseases ...	30	22	24	17
Wasting diseases	60	48	41	38

TABLE II.—*Deaths under Five Years per 1000 Living.*

Causes of death.	Boys.		Girls.	
	Urban counties.	Rural counties.	Urban counties.	Rural counties.
All causes	70·8	45·4	60·0	36·7
Measles	3·9	1·4	3·6	1·3
Scarlet fever	0·9	0·3	0·9	0·3
Whooping-cough	2·8	2·2	3·4	2·5
Diphtheria	2·0	1·0	2·0	1·0
Diarrhœal diseases	13·7	6·1	12·0	4·8
Tuberculous diseases ...	4·5	2·5	3·7	2·0
Nervous diseases	7·9	5·9	6·1	4·4
Respiratory diseases ...	13·0	8·1	10·8	6·5

The foregoing tables give the mortality for both sexes separately but the extended tables from which these are summarised show that among infants of both sexes under one year of age English mortality from all causes averaged 157 per 1000 births in the five years 1897–1901. Taking both sexes together it is found that in the same period out of every 1000 [illegible] born in the urban counties 170 died and only 128 in the rural. Among the several causes of death the most fatal are wasting diseases, which cause an average mortality of 43 in the country and 45 in the town; diarrhœal diseases, a mortality of 20 and 41 respectively; nervous diseases, a mortality of 18 and 21; and respiratory diseases, a mortality of 27 and 20. Among children under five years of age a similar rule obtains, for they die much more rapidly in the urban counties than in the rural. Referring again to the extended table in the report we find that, taking boys and girls together, the mortality under five years in the urban counties is equal to 65·0 per 1000 living at that age, against 41·0 in the rural counties. From every one of the diseases or groups of diseases in the second table the mortality is very much greater in the town than in the country and this is true whether the mortality of both sexes in the aggregate or that of each sex separately be put in comparison.

We commend these tables, or, rather, the unabridged tables from which the foregoing have been derived, to the notice of medical officers of health, most of whom will doubtless possess the original report which contains them. To a health officer desirous of ascertaining how far the infantile mortality of his district is in excess or in defect of the average the figures here alluded to will be instructive and useful, and will render unnecessary on his part elaborate and tedious calculations. In another part of the report Dr. Tatham expresses regret that he is unable to furnish annual tables of infantile mortality in time for comparison with the local returns for the same period, which returns medical officers of health are required to furnish to the Local Government Board within six weeks of the close of the year to which they relate. The quinquennial average rates, however, are available and their employment for purposes of comparison may be resorted to without fear of serious error.

VISIT OF FRENCH PHYSICIANS AND SURGEONS TO LONDON, OCT. 10TH-12TH, 1904.

A MEETING of the English Executive Committee was held at the Examination Hall, Victoria Embankment, on Monday last at which various matters in connexion with the forthcoming visit were discussed and in some cases decided, the details in others being left to the General Purposes Committee to deal with. The following members of the committee were present:—

Sir WILLIAM H. BROADBENT, Bart., in the chair.

Mr. Henry T. Butlin, Dean of the Medical Faculty, University of London.

Dr. A. D. Waller, Physiological Laboratories, University of London.

Professor C. Stewart, Conservator of Museum, Royal College of Surgeons of England.

Dr. H. Morley Fletcher and Mr. D'Arcy Power, St. Bartholomew's Hospital.

Dr. C. Theodore Williams and Dr. S. H. Habershon, Brompton Hospital for Consumption.

Mr. C. H. Golding-Bird, Guy's Hospital.

Dr. E. F. Bashford, Imperial Cancer Research Fund.

Dr. C. J. Martin, Lister Institute of Preventive Medicine.

Sir R. Douglas Powell, Bart., and Dr. W. Pasteur, Middlesex Hospital.

Dr. F. E. Batten, National Hospital for the Paralysed and Epileptic.

Dr. William Ewart, St. George's Hospital.

Mr. Henry E. Juler and Dr. Sidney P. Phillips, St. Mary's Hospital.

Mr. G. H. Makins, St. Thomas's Hospital.

Dr. Frederick T. Roberts and Dr. Sidney H. C. Martin, University College Hospital.

Dr. Donald W. C. Hood, West London Hospital.

Mr. L. A. Bidwell, West London Post-graduate College.

Dr. F. W. Mott.

Mr. Thomas Wakley, jun.

Dr. Boyd B. Joll.

Dr. J. Dundas Grant, joint treasurer.

Dr. Dawson Williams and Dr. W. Jobson Horne, secretaries.

We are informed that several physicians and surgeons have expressed a wish to entertain a certain number of our French brethren at dinner or lunch and others doubtless may

be glad in this way to extend hospitality to our visitors. It is felt, however, that if the invitations be left to individual initiative some confusion might ensue which may be avoided if gentlemen wishing to entertain will at once communicate with Dr. Donald Hood, 43, Green-street, Park-lane, London, W., giving the names of any private friends whom they specially wish to invite and leaving it to the General Purposes Committee here or to the French Organising Committee to suggest a given number of others who might, for instance, belong to any special department.

Amongst the arrangements made are the following:—The Editors of THE LANCET will entertain some of the visitors at luncheon on Monday, Oct. 10th; the Dean of the Faculty of Medicine of the University of London (Mr. H. T. Butlin) will extend a like welcome on Tuesday, Oct. 11th; the asylums committee of the London County Council has given a cordial invitation to the visitors to inspect any of the London county asylums, including the newly-opened working colony for insane epileptics at Ewell. It has been suggested that a visit might be made to the committee's pathological laboratory (of which Dr. F. W. Mott is the director) at Claybury on Wednesday, Oct. 12th. Luncheon will be provided for the guests on that occasion and Mr. E. J. Horniman, L.C.C., chairman of the pathologist subcommittee, will act as host.

We append a first list of subscriptions:—

	Subscriptions.			Further guarantees.		
	£	s.	d.	£	s.	d.
Sir William H. Broadbent, Bart.	5	5	0	5	5	0
Sir Thomas Barlow, Bart.	2	2	0	3	3	0
Sir Joseph Fayrer, Bart.	2	2	0	3	3	0
Sir R. Douglas Powell, Bart.	2	2	0	3	3	0
Sir Dyce Duckworth	2	2	0	3	3	0
Sir Anderson Critchett	5	5	0		—	
Dr. Abercrombie	2	2	0	3	3	0
Mr. L. A. Bidwell	2	2	0	3	3	0
Mr. H. T. Butlin	2	2	0	3	3	0
Dr. H. Radcliffe Crocker	2	2	0	3	3	0
Mr. George Eastes	2	2	0	3	3	0
Dr. D. Ferrier	2	2	0	3	3	0
Mr. C. H. Golding-Bird	2	2	0	3	3	0
Dr. J. Dundas Grant	2	2	0	3	3	0
Dr. S. H. Habershon	2	2	0	3	3	0
Dr. Donald W. C. Hood	2	2	0	3	3	0
Dr. W. Jobson Horne	2	2	0	3	3	0
Dr. Robert Hutchison	2	2	0	3	3	0
Dr. Percy S. Jakins	2	2	0	3	3	0
Mr. H. E. Juler	2	2	0	3	3	0
Mr. G. H. Makins	2	2	0	3	3	0
Dr. W. Murrell	2	2	0	3	3	0
Dr. George Ogilvie	2	2	0	3	3	0
Mr. T. H. Openshaw	2	2	0	3	3	0
Dr. F. W. Pavy	2	2	0	3	3	0
Dr. Sidney Phillips	2	2	0	3	3	0
Mr. D'Arcy Power	2	2	0	3	3	0
Dr. F. T. Roberts	2	2	0	3	3	0
Dr. F. M. Sandwith	2	2	0	3	3	0
Mr. Walter G. Spencer	2	2	0	3	3	0
Dr. Frederick Taylor	2	2	0	3	3	0
Dr. H. Tilley	2	2	0	3	3	0
Mr. Thomas Wakley, jun.	2	2	0	3	3	0
Dr. A. D. Waller	2	2	0	3	3	0
Dr. W. Hale White	2	2	0	3	3	0
Dr. Dawson Williams	2	2	0	3	3	0
Dr. Theodore Williams	2	2	0	3	3	0
Mr. J. M. Carvell	2	2	0		—	
Dr. W. S. Colman	2	2	0		—	
Dr. W. Pasteur	2	2	0		—	
Dr. Knowsley Sibley	2	2	0		—	
Dr. Andrew Wylie	1	1	0	2	2	0
Dr. E. F. Bashford	1	1	0	1	1	0
Dr. W. Ewart	1	1	0	1	1	0

HEALTH AND SANITATION OF LAGOS.

Sir William MacGregor in his report founded on the blue-book of the colony of Lagos for the year 1903 mentions, *inter alia*, that in 1902, on the reorganisation of the medical services in West Africa and the formation of the West African medical staff, a considerable increase was made in the salaries of medical officers in Lagos, which were fixed on the following scale: principal medical officer, £800 to £1000, by increments of £50 a year; senior medical officer, £600 to £700, by £20 a year; European medical officers, £400 to £500, by £20 a year; and native medical officers, £300 to £350, by £10 a year. The salary of a European medical officer is now the same as that of a district commissioner. Up to the revision of the scale of medical salaries these officers were not allowed private practice without special permission; they are now entitled to it unless it is expressly withdrawn. The addition of one medical officer was made to the staff in the year under review.

In connexion with the increase of expenditure it is pointed out that the medical requirements of the railway have, since the opening of the line in 1902, been added to the duties of the department. Also, much of the time of one officer has been given to the service of the Lagos Ladies' League, a body of workers who are associated together for the purpose of reaching, and supplying medicines to, the poorest and most inaccessible of the inhabitants of the town of Lagos. Special provision was made for providing the league with medicines. Nearly all the officers of the department have, with Government assistance, attended special courses of instruction on tropical diseases and two have received such particular training as would fit them to perform the duties of bacteriologist and pathologist respectively, for which some specific addition to their salary has been provided. An increase was also made to the medical expenditure for employing a larger number of vaccinators, also to enable the principal or other medical officer to visit more frequently the districts of the interior.

Much trouble has been taken in the effort to spread some knowledge of the elements of hygiene in the community. Lectures on sanitation have been delivered at Lagos by Mr. W. H. W. Strachan, Mr. W. H. G. H. Best, and Dr. C. J. Lumpkin, the courses by the two former being printed. Lectures were also delivered at Badagry by Dr. Read, at Epe by Mr. O. Sapara, at Ibadan by Mr. T. E. Rice, and in the interior by Mr. Strachan, Mr. W. A. Cole, and Dr. Obasa. After attending an elaborate course of lectures on sanitation by the principal medical officer the teachers of the primary schools subsidised by the Government who had been able to obtain by examination first- or second-class certificates taught hygiene in their schools, and for those children who successfully underwent an examination in the elements of hygiene there was paid a Government grant on the same basis as for reading or writing. The scholars presented for [illegible] 1903 [illegible] Of these 228 were successful. [illegible] from seven primary and two secondary schools took part in the competition and the judges reported that "the majority of them showed sound knowledge of the elementary laws of health."

Nearly all European and many native officers take prophylactic doses of quinine. Prisoners take ten grains weekly in one dose. One prisoner is employed to catch all the mosquitoes met with in the prison. In the seven months from June to December (both inclusive), 1903, this prisoner caught 1471 anopheletes and 1385 of the culex species. No general medical report has been received for 1903 but the senior medical officer states that "the health of the prisoners was excellent." [illegible] nature of malarial fever and the fact [illegible] the use of a printed [illegible] officer in the case of an attack of fever in the person of any officer which shows what necessary precautions have been taken or been neglected in each case. The tables of sickness and mortality show that a steady improvement has been taking place in the health of Lagos.

It was estimated that provision was made in 1901–02 for the expenditure altogether of a sum of upwards of £30,000 on services connected with sanitation and about £28,000 were actually disbursed in 1902–03.

The work of reclaiming swamps has now proceeded sufficiently far to demonstrate its great utility to the most unobservant.

UNIVERSITY OF MANCHESTER.—The new public health laboratories are now approaching completion and will be ready for lectures and practical work in public health on Friday, Oct. 14th.

POVERTY IN RELATION TO DEATH AND DISEASE IN MANCHESTER.

Dr. James Niven, medical officer of health of Manchester, takes in his current annual report refreshingly comprehensive views in his survey of the health and disease of the people. He seems to us to appreciate to the full the undoubted fact that preventive medicine must enlarge its scope if it is to continue to reduce the general death-rate and if, more particularly, it is to make substantial advance in promoting the physical fitness of the people and to create an impression upon such diseases as infantile diarrhœa and measles. Dr. Niven, in fact, appreciates what we have endeavoured to teach in our columns for some years, that true preventive medicine is largely made up of social forces and that much which is placed to the credit side of its account is largely, though of course in no sense entirely, due to the improved well-being of the people; in a word, to the greater distribution of wealth. Considerable space is devoted in the report before us to what is termed "the physical progress of the community" and the writer as the result of his considerations as to the alleged deterioration of the people concludes that as regards children (1) there has been a steady improvement in the health of school children for many years, but that (2) education must be greatly retarded by the large proportion of children suffering from mental or physical defects unfitting them to learn. Dr. Niven is not disposed to regard the appalling categories of defects recently revealed in the condition of school children as evidence of degeneration so much as an indication that preventive medicine in the proper use of the term has yet its work to do. He thinks that supervision by medical examination alone is quite insufficient and in his view it should be the duty of the school teachers, who should themselves be properly taught by medical men, to see to the physical welfare of the children. Dr. Niven urges, as we have ofttimes urged, that every child should be measured and weighed once quarterly and that a careful record of such data should be kept. He insists, however, that no child should be instructed, much less drilled, who does not receive the amount of nourishment sufficient to insure normal growth. And here naturally comes in the problem which is being so actively debated in the *Times*, the feeding of the underfed. But Dr. Niven suggests that even if this difficulty could be surmounted there would still remain the problem of how the underfed in pre-school years were to be nourished properly.

The remedy proposed for this difficulty is one with which we are quite in sympathy, although in one sense it must be for the moment a stone to those who beg for bread. In the education of the school children we see with Dr. Niven the most practical solution—partial solution we had better say—of this problem. Could the wastage in food and drink in connexion with the poor person's life be prevented his poverty would be far less, and by teaching children a subject which, as Herbert Spencer has insisted, is now neglected—that of domestic economy in all its branches—we should be laying sure foundations for a better superstructure in the future. The children should be taught not only how to cook, to sew, to mend, and to wash, but also how to feed, to clothe, and to tend infants, while the older children should be offered special prizes for knowledge as to how to expend a given sum of money in the way most calculated to provide the highest nutritive values. Dr. Niven is in a sense an optimist. He inclines to the view that the diminished death-rate at the younger ages of life indicates something more than the progress of curative medicine. He suspects that this lowered mortality implies that there are less sickness and greater resisting force—i.e., that we are not by artificial means raising up a weaker race which, were the outward environment to become more severe, would wither and die. We hope that Dr. Niven is right. But whatever may be the real answer to these questions which he raises the problems themselves are of all-absorbing human interest and they are extremely refreshing in comparison with the somewhat restricted views of many medical officers of health.

Dr. Niven's discussion on "Poverty as Productive of a High Death-rate" is also very interesting reading. As he says:—

> When one comes to reflect on the various causes productive of ill-health and of that more intense form of ill-health which ends in death, the influences of poverty and more particularly of unsettled poverty loom larger and larger. [illegible] who die virtually of starvation year by year. [illegible] the vagrant classes are at present increasin[illegible] of the country in summer and the disease carriers of the town in winter. No one who has seen much of the inhabitants of the lower class of common lodging-houses can help considering whether it is inevitable that great numbers of men should sink so low. Many of them can and do work, perhaps earn 25s. to 30s. a week. Their lodgings cost them 2s. a week; their food perhaps 5s. What becomes of the rest? Others, again, more thrifty of health and effort, work a few hours in the morning and are amply supplied. These men, unshackled by family cares and expenses, keep down the price of labour and the standard of life.

Dr. Niven then discusses with a fulness which our space will not allow us to follow the forces which make for vagrancy and here again he sees the remedy in the "kind and quality of the instruction imparted to children generally." The married man, as the author says, is subjected to a severe competition from the inhabitants of common[illegible] nd this organisation of casual labour [illegible] to the preferential employment of marri[illegible] ot the real cause of the increase of the common lodging-house vagrant of a certain sort the growth of selfishness, the indisposition to work more than is necessary to supply the physical wants of the individual; in other words, the absence of ambition and of self respect? If this be so, the remedy is really in a better moral education. And perhaps this is in Dr. Niven's mind when he says, "There is but one way to cope with this social danger. The children must be educated, and well educated, in such a manner as will enable them to meet with confidence the difficulties and temptations of life"; and "If this object is to be achieved the education authority must see that these children are adequately fed so that they may grow *normally* and so that the enormous development and laying out of brain protoplasm necessary for educational purposes may be promoted." We entirely agree but here we again feel ourselves confronted with the free feeding obstacle or, at any rate, something akin to it.

Some very interesting figures are also presented in the report illustrating the intimate connexion between poverty and death in urban districts as indicated by the Manchester figures. The indices of poverty which are taken are the death-rates of those inhabitants who end their lives in the union hospitals and in other institutions, the former indicating a deeper degree of poverty than the latter:—

TABLE I.—*Average Annual Death-rate (corrected for the Census Figures 1891 and 1901) for 1891–1901 amongst Persons Dying at Home, in Union Hospitals, and in other Institutions; also the Different Death-rates for the City and its Three Main Divisions.*

—	Home death-rate.	Workhouses death-rate.	Hospital death-rate.	All death rate.
City	18·69	2·96	1·62	23·27
Manchester township	21·45	6·09	2·51	30·05
Northern	16·64	0·81	1·26	18·71
Southern	18·26	2·36	1·30	21·92

These figures tell their own story. But in order to eliminate the fallacy which might arise from taking the death-rate a[illegible] all ages Dr. Niven furnishes the following tables relative to the death-rates at different periods of life, such death[illegible] including those which occur in the union and in other hospitals from all causes and also from pulmonary tuberculosis:—

TABLE II.—*Showing Deaths from all Causes.*

Division.	All ages.	0–5.	5–15.	15–25.	25–45.	45–65.	65 and upwards.
Manchester township	30·05	104·72	5·26	5·68	16·69	45·88	127·39
Northern	18·71	66·24	3·80	4·37	8·74	27·32	101·22
Southern	21·92	78·46	4·03	4·67	10·65	32·23	112·45
City	23·27	82·19	4·30	4·86	11·77	34·94	113·57

Deaths from Phthisis (Pulmonary Tuberculosis).

Manchester township	3·21	0·47	0·53	1·84	5·68	6·22	3·[illegible]
Northern	1·29	0·23	0·26	1·40	2·21	1·99	0·[illegible]
Southern	1·87	0·47	0·35	1·54	3·12	3·17	1·[illegible]
City	2·08	0·40	0·38	1·53	3·57	3·75	1·[illegible]

He has selected pulmonary tuberculosis because in his view, and we are here quite in agreement with him, it "is a disease which eminently reflects the influence of poverty, being determined by overcrowding, physical privation, anxiety, want of rest, and all the factors which are dependent on poverty." That is to say, that the reduction of the prevalence of this already waning disease is overwhelmingly, in relation to other causes, a social problem, and the sooner this fact is appreciated the better will it be for future generations.

As is shown by the table last given, the death-rate from phthisis in the Manchester township is at childhood and at ages 25–44 more than twice, at ages 45–64 three times, and at ages above 65 more than five times as great as that in Northern Manchester, and in connexion with the main thesis of this article it may be added that similar, though smaller, differences at nearly every period of life are manifest in respect of measles, whooping-cough, diarrhœa, nervous diseases, diseases of the circulation, pneumonia, and other respiratory diseases. Do we thoroughly appreciate what all this means in relation to the scope of preventive medicine and, if so, had we better press the meaning to extremes? But Dr. Niven has carried his investigations to a further point and by adopting a line of inquiry similar to that pursued by Mr. Rowntree in the city of York he has shown what a very large class there is in Manchester which is without the means to secure adequate nourishment for bodily efficiency. Our readers who take an interest in these problems will remember that Mr. Rowntree was able to establish the fact that over one-tenth of the population of York were in a condition of what he termed "primary poverty"—i.e., they were unable to procure the necessities of existence. As Dr. Niven states, it is necessary fully to appreciate the meaning of primary poverty. The stunted child is nature's method of expressing insufficiency of food and a stunted body is but too frequently accompanied by a contracted mind. "If," says the report before us, "a man has not enough to eat he cannot do his work. To save his life, therefore, he must shirk work. The badly fed man is inefficient of necessity. If he cannot shirk work sufficiently, so that his food provides for the internal work of his organs and animal heat and the work he does, he takes disease and dies. It is a process very costly to the community, though worse evils might attend the wrong remedy."

Now proceeding upon the same general lines adopted by Mr. Rowntree at York, and making due allowance for the current price of food in Manchester, Dr. Niven found that it is possible to obtain a [illegible] for as little as 3¾*d.* per diem [illegible] for variety probably 5*d.*, [illegible] the smallest amount for which an adequate diet could be obtained. [illegible] not afford 7*d.* per man. From an analysis of all his figures it was concluded by Dr. Niven that 29 families must have been suffering from actual insufficiency of food. We should very much like to see this inquiry extended and elaborated and it would be well if medical officers of health of other towns would initiate inquiries upon similar lines. There can surely be no question that inquiries of this nature are the very essence of public health, unless, that is to say, it is contended that the "disease" called insufficiency of food is not capable of alleviation. Inquiries of this sort will at least bring out one point and that is the need for education in the matter of procuring the greatest food values for a given expenditure of money. With knowledge of this nature many persons who are at present practically starving could be furnished with a sufficiency of food and with a due appreciation of the extravagance of alcohol much money might be diverted from physiologically useless into physiologically productive channels. We are fully aware of the social and political strife which is not unlikely to arise out of questions of this nature and public health in its own interests should avoid politics as it avoids the plague. But preventive medicine may fairly ask, and our sanitary authorities who are now the education authorities have a right to insist, that the children shall at least be taught how to procure their nutriment as economically as possible. Herein is a partial alleviation of poverty which preventive medicine must use every endeavour to promote.

Looking Back.

FROM

THE LANCET, *SATURDAY*, SEPT. 30, 1826.

VISIT OF BARON DUPUYTREN AT GUY'S HOSPITAL—OPERATION OF LITHOTOMY BY MR. KEY.

On Tuesday last, that illustrious French surgeon, Baron Dupuytren, visited Guy's Hospital, and went round the wards with Sir Astley Cooper. The circumstance of his being about to visit the Hospital being generally known on the preceding day, a large concourse of pupils assembled to meet him, by whom he was received with marked attention and politeness. He immediately proceeded round the wards with Sir A. Cooper; amongst the cases which were pointed out as particularly worthy of notice, were the case of strangulated hernia related in this week's reports, a case of empyema, and compound fracture of the cranium.

A long discussion ensued between Dupuytren and Sir Astley Cooper in Accident Ward, on the subject of fracture of the neck of the thigh bone. We understood the former to assert the possibility of ossific union taking place; he said that he had a preparation illustrative of this fact, which he would take care to forward for Sir Astley's inspection. The treatment usually adopted by him in fractures of the neck of the thigh bone, he said was, to place the limb on a double inclined plane, and he usually found that the parts had united at the termination of eighty days, that is, about double the length of time usually assigned for the union of fractures in other parts of the thigh bone. When Dupuytren was about to enter the Accident Ward, Sir Astley Cooper turned round, and addressing Mr. Key and Mr. Callaway in his usual jocose manner said, "Now if you have got a *good* fracture of the thigh, and one *properly* done up, let the Baron see it, but for God's sake do not shew him one of the *ram's horn* cases which every now and then happens."

Dupuytren objected generally to the beds used in this Hospital; he recommended first a straw mat, then a flock mattrass, and lastly on this a flock bed. After seeing several other cases, he proceeded to the operating theatre, in order to witness the operation of lithotomy by Mr. Key.

The patient, a boy about five years of age, was placed on the table; the straight staff was passed without difficulty, and Mr. Key effected his incision into the bladder with his accustomed dexterity. The forceps were now introduced, and speedily afterwards Mr. Key withdrew them, and passing his finger through the wound into the bladder, turned round, and looking aghast, exclaimed, "*The stone is not in the bladder, it is in an abscess at the neck of the bladder.*" It was somewhat unfortunate that Mr. Key should have made this remark, for on raising the forceps, he found that the calculus had been withdrawn, and was then actually between the blades of the instrument, but it was so small that it had previously escaped observation. The satisfaction depicted in the operator's countenance on making this discovery, may readily be conceived. Sir Astley Cooper afterwards remarked to a pupil, (apparently with great feeling,) it is fortunate for the honour of Guy's Hospital, that the operation terminated in this satisfactory manner.

"The best thing you could have done," said Sir Astley to Mr. Key, "if you had not found a stone, would have been to hang yourself up by the neck." (What says Ben Travers to this?)

Dupuytren expressed his approbation of Mr. Key's operation in the highest possible terms of praise; he said that he had frequently seen the operation performed with much dexterity, but never "more promptly, more decisively, or more happily (*bonheur*) than on the present occasion."

Baron Dupuytren, after the operation, visited the museum, the Lecture room, and other parts of the new buildings. When he took his leave of Sir Astley Cooper, he saluted the worthy baronet on each cheek; the manner in which Sir Astley submitted to this ceremony, afforded no small share of amusement to the pupils standing round, which was heightened by his observing, "Well, I am even with the Baron, for I saluted his daughter yesterday, when he was out of the way."

A scene worthy of the pencil of Hogarth occurred in the presentation of the Pharmacopœia Gayensis (plurimum aucta et emendata) to Dupuytren, by the venerable Stocker—the standard-pestle of Guy's Hospital.

POVERTY IN RELATION TO DEATH AND DISEASE IN MANCHESTER.

Dr. James Niven, medical officer of health of Manchester, takes in his current annual report refreshingly comprehensive views in his survey of the health and disease of the people. He seems to us to appreciate to the full the undoubted fact that preventive medicine must enlarge its scope if it is to continue to reduce the general death-rate and if, more particularly, it is to make substantial advance in promoting the physical fitness of the people and to create an impression upon such diseases as infantile diarrhœa and measles. Dr. Niven, in fact, appreciates what we have endeavoured to teach in our columns for some years, that true preventive medicine is largely made up of social forces and that much which is placed to the credit side of its account is largely, though of course in no sense entirely, due to the improved well-being of the people; in a word, to the greater distribution of wealth. Considerable space is devoted in the report before us to what is termed "the physical progress of the community" and the writer as the result of his considerations as to the alleged deterioration of the people concludes that as regards children (1) there has been a steady improvement in the health of school children for many years, but that (2) education must be greatly retarded by the large proportion of children suffering from mental or physical defects unfitting them to learn. Dr. Niven is not disposed to regard the appalling categories of defects recently revealed in the condition of school children as evidence of degeneration so much as an indication that preventive medicine in the proper use of the term has yet its work to do. He thinks that supervision by medical examination alone is quite insufficient and in his view it should be the duty of the school teachers, who should themselves be properly taught by medical men, to see to the physical welfare of the children. Dr. Niven urges, as we have ofttimes urged, that every child should be measured and weighed once quarterly and that a careful record of such data should be kept. He insists, however, that no child should be instructed, much less drilled, who does not receive the amount of nourishment sufficient to insure normal growth. And here naturally comes in the problem which is being so actively debated in the *Times*, the feeding of the underfed. But Dr. Niven suggests that even if this difficulty could be surmounted there would still remain the problem of how the underfed in pre-school years were to be nourished properly.

The remedy proposed for this difficulty is one with which we are quite in sympathy, although in one sense it must be for the moment a stone to those who beg for bread. In the education of the school children we see with Dr. Niven the most practical solution—partial solution we had better say—of this problem. Could the wastage in food and drink in connexion with the poor person's life be prevented his poverty would be far less, and by teaching children a subject which, as Herbert Spencer has insisted, is now neglected—that of domestic economy in all its branches—we should be laying sure foundations for a better superstructure in the future. The children should be taught not only how to cook, to sew, to mend, and to wash, but also how to feed, to clothe, and to tend infants, while the older children should be offered special prizes for knowledge as to how to expend a given sum of money in the way most calculated to provide the highest nutritive values. Dr. Niven is in a sense an optimist. He inclines to the view that the diminished death-rate at the younger ages of life indicates something more than the progress of curative medicine. He suspects that this lowered mortality implies that there are less sickness and greater resisting force—i.e., that we are not by artificial means raising up a weaker race which, were the outward environment to become more severe, would wither and die. We hope that Dr. Niven is right. But whatever may be the real answer to these questions which he raises the problems themselves are of all-absorbing human interest and they are extremely refreshing in comparison with the somewhat restricted views of many medical officers of health.

Dr. Niven's discussion on "Poverty as Productive of a High Death-rate" is also very interesting reading. As he says:—

> When one comes to reflect on the various causes productive of ill-health and of that more intense form of ill-health which ends in death, the influences of poverty and more particularly of unsettled poverty loom larger and larger. There are a great many who die virtually of starvation year by year. There is little doubt that the vagrant classes are at present increasing. They are the terror of the country in summer and the disease carriers of the town in winter. No one who has seen much of the inhabitants of the lower class of common lodging-houses can help considering whether it is inevitable that great numbers of men should sink so low. Many of them can and do work, perhaps earn 25s. to 30s. a week. Their lodgings cost them 2s. a week; their food perhaps 5s. What becomes of the rest? Others, again, more thrifty of health and effort, work a few hours in the morning and are amply supplied. These men, unshackled by family cares and expenses, keep down the price of labour and the standard of life.

Dr. Niven then discusses with a fulness which our space will not allow us to follow the forces which make for vagrancy and here again he sees the remedy in the "kind and quality of the instruction imparted to children generally." The married man, as the author says, is subjected to a severe competition from the inhabitants of common lodging-houses, and this organisation of casual labour might be directed to the preferential employment of married men. But is not the real cause of the increase of the common lodging-house vagrant of a certain sort the growth of selfishness, the indisposition to work more than is necessary to supply the physical wants of the individual; in other words, the absence of ambition and of self respect? If this be so, the remedy is really in a better moral education. And perhaps this is in Dr. Niven's mind when he says, "There is but one way to cope with this social danger. The children must be educated, and well educated, in such a manner as will enable them to meet with confidence the difficulties and temptations of life"; and "If this object is to be achieved the education authority must see that these children are adequately fed so that they may grow normally and so that the enormous development and laying out of brain protoplasm necessary for educational purposes may be promoted." We entirely agree but here we again feel ourselves confronted with the free feeding obstacle or, at any rate, something akin to it.

Some very interesting figures are also presented in the report illustrating the intimate connexion between poverty and death in urban districts as indicated by the Manchester figures. The indices of poverty which are taken are the death-rates of those inhabitants who end their lives in the union hospitals and in other institutions, the former indicating a deeper degree of poverty than the latter:—

TABLE I.—*Average Annual Death-rate (corrected for the Census Figures 1891 and 1901) for 1891–1901 among Persons Dying at Home, in Union Hospitals, and in other Institutions; also the Different Death-rates for the City and its Three Main Divisions.*

—	Home death-rate.	Work-houses death-rate.	Hospital death-rate.	All death rate.
City	16·69	2·96	1·62	23·27
Manchester township... ...	21·45	6·09	2·51	30·05
Northern	16·64	0·81	1·26	18·71
Southern	18·25	2·36	1·30	21·92

These figures tell their own story. But in order to eliminate the fallacy which might arise from taking the death-rate of all ages Dr. Niven furnishes the following tables relative to the death-rates at different periods of life, such death including those which occur in the union and in other hospitals from all causes and also from pulmonary tuberculosis:—

TABLE II.—*Showing Deaths from all Causes.*

Division.	All ages.	0–5.	5–15.	15–25.	25–45.	45–65.	65 and upwards.
Manchester township	30·05	104·72	5·26	5·68	16·69	45·68	127·3[illegible]
Northern	18·71	66·24	3·60	4·37	8·74	27·32	101·[illegible]
Southern	21·92	78·46	4·03	4·67	10·65	32·23	112·[illegible]
City	23·27	82·19	4·30	4·86	11·77	34·94	115·[illegible]
Deaths from Phthisis (Pulmonary Tuberculosis).							
Manchester township	3·21	0·47	0·53	1·84	5·68	6·22	3·[illegible]
Northern	1·29	0·23	0·26	1·40	2·21	1·99	0·[illegible]
Southern	1·87	0·47	0·35	1·54	3·12	3·17	1·[illegible]
City	2·08	0·40	0·38	1·58	3·57	3·75	1·[illegible]

rest to other causes. The Commissioners in Lunacy state in their report that the asylum was in good order throughout, that the inmates appeared to be well and conscientiously cared for, that the condition of the wards and dormitories was excellent, and that the medical case-books were well kept. They record with satisfaction the scientific work, both clinical and pathological, conducted by the members of the medical staff.

Wilts County Asylum (Report for the year ending March 31st, 1904).—The average number of patients resident during the [illegible] and 538 females. [illegible] to 159—viz., 76 m[illegible] first admissions. Mr. John Ireland Bowes, the medical superintendent, states in his report that the chief causes of insanity in the admissions were hereditary predisposition in 63 cases, previous attacks in 37, and alcoholic intemperance in 27 cases. There is, says Mr. Bowes, an increase of insanity from bodily disease, probably due to much intermarrying in Wiltshire, as compared with adjoining counties. The number of patients discharged as recovered during the year amounted to 59—viz., 26 males and 33 females, or 6·0 per cent. of the average number resident. The deaths during the year amounted to 64, or 6·5 per cent. as calculated on the same basis. Of the deaths four were due to cerebral hæmorrhage, five to organic brain disease, six to general paralysis of the insane, seven to senile decay, eight to cardiac disease, 11 to pulmonary and other forms of tuberculosis, and the rest to other causes. One male patient made his escape but was captured. The general health of the patients has been satisfactory during the year and there were no cases of infectious disease apart from the usual visitation of influenza and an outbreak of dysenteric diarrhœa. "Those affected with the latter disease were isolated as far as the congested state of the wards would allow and it is hoped," adds Mr. Bowes, "the disease has been cut off. Though many asylums have suffered from similar and much more extensive outbreaks this is the first occasion on which the disease has prevailed in epidemic form in this asylum. As there is no evidence of internal sanitary defects the overcrowding, particularly in the female division, may have conduced to its occurrence." The isolation hospital was occupied on August 3rd, 1903, and up to the present, and in the absence of other infectious disease, has been used chiefly for consumptive female patients, for whom it provides most comfortable and suitable accommodation. The Commissioners in Lunacy state in their report that the asylum continues to be maintained in excellent order, that the wards are very bright and cheerful and plentifully supplied with objects of interest, that the dormitories were clean and in good order throughout, that the new laundry had been finished and was in use, that the means of exit in case of fire were ample, that the patients were tidy and neat in personal appearance, and that the medical case-books were carefully and intelligently kept. The committee of management states in its report that a sum of £14,837 has been expended upon the new laundry, including its machinery and accessories, and upon new wells, pumping machinery, and mains.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8234 births and 4688 deaths were registered during the week ending Sept. 24th. The annual rate of mortality in these towns, which had been 18·2, 17·5, and 17·0 per 1000 in the three preceding weeks, further declined last week to 16·0 per 1000. In London the death-rate was 13·7 per 1000, while it averaged 17·0 in the 75 other large towns. The lowest death-rates in these towns were 7·0 in Burton-on-Trent, 7·0 in Hornsey, 8·3 in Willesden, 10·3 in Walthamstow, 10·5 in Barrow-in-Furness, and 10·9 in Bristol and in York; while the highest rates were 21·7 in Warrington, 21·8 in Burnley, 22·2 in Merthyr Tydfil, 23·1 in Sunderland, 23·2 in Rotherham, 23·7 in Salford and in Middlesbrough, 24·6 in Bolton, and 25·3 in Hanley. The 4688 deaths in these towns last week included 971 which were referred to the principal infectious diseases, against 1636, 1512, and 1192 in the three preceding weeks; of these 971 deaths, 754 resulted from diarrhœa, 53 from diphtheria, 51 from "fever" (principally enteric), 50 from whooping-cough, 37 from measles, 24 from scarlet fever, and two from small-pox. No death from any of these diseases was recorded last week in Bournemouth; while they caused the lowest death-rates in Willesden, Hornsey, Handsworth (Staffs.), Wigan, and Rochdale; and the highest rates in Hanley, Grimsby, Warrington, Bolton, Oldham, Rotherham, Hull, Stockton-on-Tees, West Hartlepool, and Sunderland. The greatest proportional mortality from measles occurred in Birkenhead; from whooping-cough in G[illegible] Shields, and Rhondda; and f[illegible] Grimsby, Warrington, Bolton, [illegible] brough, Sunderland, Tynemouth, [illegible] mortality from scarlet fever, f[illegible] "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Oldham and one in Stockton-on-Tees, but none in any other of the 76 towns. The Metropolitan Asylums Hospitals contained five small-pox patients at the end of last week, against nine, eight, and five at the end of the three preceding weeks; no new cases were admitted during the week, against two, two, and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1820, 1816, and 1929 on the three preceding Saturdays, had further risen to 1969 on Saturday, Sept. 24th; 284 new cases were admitted during the week, against 266, 234, and 340 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 108, 129, and 141 in the three preceding weeks, further rose last week to 169, and were 34 above the number in the corresponding period of last year. The causes of 39, or 0·8 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Bradford, Leeds, Sheffield, and in 48 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Preston, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·0, 15·7, and 16·5 per 1000 in the three preceding weeks, declined again to 16·0 per 1000 during the week ending [illegible] with the mean rate during the [illegible] English towns. The rates in th[illegible] from 11·2 in Greenock and 13·6 [illegible] and 26·2 in Perth. The 529 deaths in these towns included 60 which were referred to diarrhœa, 17 to whooping-cough, three to measles, three to scarlet fever, three to "fever," and one to diphtheria, but not any to small-pox. In all, 87 deaths resulted from these principal infectious diseases last week, against 100, 86, and 103 in the three preceding weeks. These 87 deaths were equal to an annual rate of 2·6 per 1000, which was 0·7 per 1000 below the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 58, 52, and 69 in the three preceding weeks, declined again last week to 60, of which 30 were registered in Glasgow, 16 in Dundee, four in Edinburgh, four in Aberdeen, three in Leith, and two in Greenock. The deaths from whooping-cough, which had been 26, 17, and 13 in the three preceding weeks, rose again to 17 last week, and included nine in Glasgow, four in Edinburgh, two in Dundee, and two in Paisley. The fatal cases of scarlet fever, which had been two in each of the two preceding weeks, increased last week to three, of which two occurred in Edinburgh, where, also, two of the three deaths referred to "fever," were recorded. The deaths attributed to diseases of the respiratory organs in these towns, which had been 53, 58, and 55 in the three preceding weeks, rose again to 66 last week but were 18 below the number in the corresponding period of last year. The causes of 16, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·9, 20·8, and 16·8 per 1000 in the three preceding weeks, rose again to 25·9 per 1000 during the week ending Sept. 24th. During

the past four weeks the death-rate has averaged 20·9 per 1000, the rates during the same period being 15·2 in London and 14·5 in Edinburgh. The 188 deaths of persons belonging to Dublin registered during the week under notice were 66 in excess of the number in the preceding week and included 34 which were referred to the principal infectious diseases, against 29, 32, and 17 in the three preceding weeks; of these, 28 resulted from diarrhœa, four from whooping-cough, one from measles, and one from "fever," but not any from small-pox, scarlet fever, or diphtheria. These 34 deaths were equal to an annual rate of 4·7 per 1000, the death-rates last week from the principal infectious diseases being 1·7 in London and 1·9 in Edinburgh. The fatal cases of diarrhœa, which had been 26, 26, and 14 in the three preceding weeks, rose again last week to 28. The 188 deaths in Dublin last week included 50 of children under one year of age and 44 of persons aged 60 years and upwards; the deaths of infants were slightly in excess of the number in the preceding week, while those of elderly persons showed a very considerable increase. Eight inquest cases and two deaths from violence were registered; and 65, or more than a third, of the deaths occurred in public institutions. The causes of nine, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon James Crawford Dow has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments are notified:—Fleet Surgeon G. A. Dreaper to the *Hermione*. Staff Surgeons: A. H. L. Cox to the *Hermione* and to the *Fox* on re-commissioning and C. T. W. Burton to the *Acheron*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel E. M. Wilson, C.B., C.M.G., D.S.O., retires on retired pay (dated Sept. 28th, 1904). The undermentioned Lieutenants to be Captains: A. W. A. Irwin (dated July 1st, 1904) and G. G. Thomson (dated August 3rd, 1904).

Lieutenant R. L. V. Foster is transferred from the Station Hospital, Jullundur, to the Station Hospital, Mooltan. Captain H. Herrick joins at Aldershot and is appointed Medical Officer in charge of the troops at Deepcut. Colonel P. M. Ellis is appointed Principal Medical Officer, 7th Division, Third Army Corps, and Colonel E. H. Fenn is appointed Principal Medical Officer, Thames and Woolwich Districts.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement of the undermentioned officers:—*Bombay:* Lieutenant-Colonel Konaba Ranchhoddas Kirtikar (dated May 24th, 1904). *Bengal:* Lieutenant-Colonel Gilbert Saunders Griffiths (dated June 1st, 1904) and Major Narendra Prasanna Sinha (dated June 1st, 1904).

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*Home District: Artillery:* 3rd Middlesex Royal Garrison Artillery (Volunteers): Surgeon-Major Alfred Lingard. *Rifle:* 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment): Brigade-Surgeon-Lieutenant-Colonel William Dakin Waterhouse. *Western District: Artillery:* 2nd Devonshire Royal Garrison Artillery (Volunteers): Surgeon-Lieutenant-Colonel Arthur Kyffin Crossfield (deceased). *Rifle:* 5th (The Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Major Edgar Haydon. *North-Western District: Artillery:* 1st Volunteer Battalion the King's (Shropshire Light Infantry): Surgeon-Lieutenant-Colonel Frederick Knollys Pigott. 5th (Ardwick) Volunteer Battalion the Manchester Regiment: Surgeon-Major John George Saville, retired. *Scottish District: Artillery:* 1st Banff Royal Garrison Artillery (Volunteers): Surgeon-Major William Lemmon Stewart, retired. *Rifle:* 8th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Major Robert Kirk. 1st Dumbartonshire Volunteer Rifle Corps: Acting Chaplain the Reverend John McKeessor Webster. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders): Lieutenant-Colonel and Honorary Colonel Sir Robert Drummond Moncreiffe, Bart. *North-Eastern District: Rifle:* 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment): Brigade-Surgeon-Lieutenant-Colonel Frederick Henry Appleby.

THE STONEHOUSE NAVAL HOSPITAL.

Admiral Sir E. H. Seymour, G.C.B., Commander-in-Chief at Devonport, on Sept. 22nd inspected the Royal Naval Hospital at Stonehouse (Plymouth). After visiting the wards and inspecting the officers', nurses', and attendants' quarters the admiral was also shown the new hospital buildings which have been commenced and the details of further proposed buildings were explained to him.

THE WAR IN THE FAR EAST.

There has been but little news from the seat of war in the Far East during the past week. For the moment public attention has been occupied with the struggle at Port Arthur and diverted from the operations of the belligerents in the field in the vicinity of Mukden, where both sides have been hurrying up reinforcements and the munitions of war and where the Japanese are once again endeavouring by a great flank movement to envelop the Russian army. The prolongation of the siege of Port Arthur, the escape of General Kuropatkin's army from Liaoyang, and the apparent determination of the Russians to carry on the war until further opposition on the part of the Japanese can be borne down by mere weight of numbers and money have not, of course, been without their [illegible] on Japan. But the gaps caused in [illegible] lost by wounds and sickness are promptly filled up and the warlike and patriotic spirit of the population of Japan remains the same. Although it is recognised that the war may be more protracted than was hoped at one time, the interval between this and winter has now become very short in which to make a supreme effort at decisive operations. The cold weather has set in more quickly than was anticipated and finds neither of the belligerents prepared with sufficient supplies of warm clothing, but efforts are being made on both sides to meet these requirements. Cold, wet, and windy weather prevails at Mukden. The Russian soldier stands, as might be expected, the cold much better than the Japanese who, sleeping now in the open in their khaki clothing, are quite insufficiently protected against it, but stores of winter clothing, we are [illegible] ing to a despatch from General [illegible] his command is healthy.

Prince Lvoff, who had been intrusted with plenary powers by the Zemstvos to arrange for assistance for the sick and wounded in the Far East, has left the front for St. Petersburg. General Kuropatkin, in taking leave of him, expressed the hope that he would soon see further detachments of ambulance men from the Zemstvos at the advanced positions, and particularly during the winter campaign.

At Port Arthur, where the attacks on that fortress have been recently renewed with greatly increased and desperate vigour, it is believed that several forts in the second line of defence have been captured. It is reported that General Stoessel's brave troops, in addition to all they have had to bear from repeated bombardments and fierce assaults, are not in at all a satisfactory state of health. Cholera is said to have broken out among them and although there have only been a few cases up to Sept. 19th grave fears are entertained that the disease may become epidemic. Although it is possible, of course, that the germs of cholera may somehow have been introduced from without into the besieged fortress it is most probable that the alleged cholera outbreak has been caused by a deficient and fouled water-supply. Prince Radziwill who managed to make his escape from Port Arthur to Chifu is believed to be the bearer of important despatches to General Kuropatkin. The Prince, in describing the situation at Port Arthur, gave some details of savagery that had been exhibited on both sides as illustrative of the horribly bitter feeling of the besiegers and besieged to one another. Severely blockaded as Port Arthur is at the present time, we can know little or nothing of the actual state of its defending garrison as to its general health, the number of sick and wounded under treatment, the disposal of the dead, and the sanitary state of the fortress generally. The Japanese, whose losses in their various assaults must amount to a very large total, are silent on these and all other subjects and can

probably know but little of the state of Port Arthur within. But it must be terrible as it is and bound to grow worse the longer the siege continues. Everybody will regard it as sad news that the wife of its brave and determined commander has been wounded in tending to the injured in hospital.

THE STATE OF THE RUSSIAN ARMY IN MANCHURIA AND THE RECENT REVELATIONS REGARDING GERMAN ARMY DISCIPLINE.

These are subjects which do not ordinarily come within the purview of medical journalists but they cannot be altogether ignored. One of the great causes of Russian failure in the field has been attributed to the fact that, however able General Kuropatkin and his generals might be and notwithstanding the courage and dogged determination of the Russian troops under their command, there were a great many commanding officers and others holding subordinate positions with regard to whom little or no reliance could be felt that they would carry out their plans in an enterprising and judicious way. The general orders discovered in the Russian headquarters at Liaoyang reveal a remarkable lack of discipline and efficient military training on the part of many of them. Nor can the evil be limited to the fighting operations only but it extends more or less to everything connected with military and departmental administration—the transport and supply of food and all the munitions of war, as well as the proper provision and distribution of the hospital and medical service in the field. General Kuropatkin deserves great credit for having taken strong punitive measures. As regards the disclosures which have been published about the barbarous and tyrannical way in which recruits and soldiers of the German army are liable to be treated by non-commissioned officers and others we can only trust that the alleged details are greatly exaggerated. From all we read it seems that they are the outcome of a dominating spirit of military arrogance which should be peremptorily curbed and for which, so far as we can judge, the punishments awarded have hitherto been very inadequate.

Correspondence.

"Audi alterum partem."

ANTE-NATAL NURTURE AND PHYSIQUE.

To the Editors of THE LANCET.

SIRS,—In the summary you give in THE LANCET[1] of the report of the Privy Council upon Physical Degeneration you lay emphasis upon the evidence given by Professor Cunningham and Dr. Eichholz with regard to the influence of ante-natal nutrition on the physique of the offspring. To quote your words: "Professor D. J. Cunningham, whilst subscribing to the opinion that such diseases as syphilis and alcoholism transmit their effects to the third and even the fourth generation, adhered firmly to the view that inferior bodily characters, the result of poverty and not of vice, are not transmissible from parent to offspring." Dr. Eichholz made some very emphatic statements with regard to the influence of the health of the mother on the nutrition of the fœtus. You say that Dr. Eichholz "recalled a medical factor of supreme importance—viz., the small percentage of unhealthy births among the poor, even down to the poorest. .. ... The poorest and most ill-nurtured women bring forth as hale and strong looking babies as those in the best conditions. In fact, it almost appears as though the unborn child fights strenuously for its own health at the expense of the mother and arrives in the world with a full chance of living a normal physical existence."

May I point out that these opinions are by no means universally accepted? They are diametrically opposed to the observations and experiments of Dr. Noel Paton.[2] This writer concludes his paper with the remark that his experimental observations "warrant the conclusion that the size of the offspring depends very directly upon the diet and nutrition of the mother during pregnancy. While this explains the easy labours among the healthy lower classes and confirms Prochownick's conclusion that by dieting the mothers the children of rickety women may be so reduced in size as to be viable, it also probably helps to explain the very high infant mortality among the very poor. The infant starts life at a low level and readily succumbs to the hardships to which it is too often subjected." Again, to quote Dr. W. Leslie Mackenzie,[3] "How the conditions resulting from ignorance, or incapacity, or indifference, or economic conditions are to be remedied is too large a question to be discussed here. But that ante-natal malnutrition of children is a large factor in life and *a fortiori* in the school life of the child [illegible] again, "That the physique [illegible] by its ante-natal nutrition [illegible] maintained by experienced physicians that the length and weight of the child at birth depends on the feeding and nutrition of the mother during pregnancy." The same writer quotes the opinion of Dr. A. K Chalmers, the medical officer of health of Glasgow, to the effect that the excessive mortality in Glasgow during the first three months of life is due in part to defective conditions which are ante-natal in their origin.

My own experience in the out-patient room entirely confirms the opinion that the nutrition of the mother has a very important bearing on the nutrition of the fœtus and that the statement that the percentage of unhealthy births among the poor is small is not justified by facts. We constantly see fully-developed infants a day or two old brought by midwives or neighbours exceedingly badly nourished, blue and feeble, and who are clearly ill-fitted, as the event indeed proves, to withstand the conditions of an external existence. There must be numbers of such born in this city that perish within a few weeks of their birth and who fail to thrive for even a day. There is no question of syphilis; they are the children of poor mothers who have lived lives of hard wear and tear during pregnancy, are themselves badly nourished and weakly, and have felt the pinch of poverty, though often perhaps poverty of the secondary sort. I have a strong conviction also that the infants of the poorer and weaker mothers, even though they are born fairly well nourished, are difficult to rear and readily waste even when under fairly favourable conditions in a home or hospital. How many of this class with hare-lips or cleft-palates who are taken into hospital when a few days old with the idea of "feeding them up" to prepare them for operation fail to thrive?

In the majority of infants seen for the first time when older, suffering from some form of malnutrition, it is of course, impossible to say for certain how far their miserable condition is the result of ante-natal conditions, though the history often points this way. I have no wish to minimise in any way the baneful effects of "feckless mothering," dirty milk, and insanitary surroundings, but I want to emphasise the fact that many of these infants start their independent life at a low level and are extremely susceptible to the untoward conditions to which they are subject. Is not the sperm-germ the starting point of the individual life? However strong may be the tendencies derived from ancestors, may not these be modified or intensified by environment during the months of early development? Are syphilis and alcohol the only disturbing elements? May not even the deep-lying characteristics of the individual be modified, as, for instance, in the case of Mongolian imbeciles, by an exhausted or weakly mother? I for one am very sceptical as regards the "unborn child fighting strenuously for its own health at the expense of its mother"; say, rather, that the new life shows more or less adaptability to abnormal environment, but adaptability has its limits and abnormal conditions are only too prone to bring disaster on the individual and in the long run help to mar the progress of the race.

I am, Sirs, yours faithfully,

Manchester, Sept. 20th, 1904 HENRY ASHBY.

THE MEDICAL REGISTER.

To the Editors of THE LANCET.

SIRS,—In the interests of the profession may I ask you to be good enough in your next issue to draw the attention of practitioners to the importance of keeping their addresses correct in the Medical Register. The chief points to which I should like to call attention are:—

1. The Register should not be confused with the Medical

[1] THE LANCET, Sept. 10th, p. 785.

[2] The Influence of Diet in Pregnancy on the Weight of the Offspring, THE LANCET, July 4th, 1903, p. 21.

[3] The Medical Inspection of School Children, p. 140.

Directory as is so often done. Changes should be notified to this office by practitioners themselves and in acknowledgment of every such notification a postcard is sent. 2. This year circulars of inquiry have been sent to all practitioners *who originally registered at the office of the Branch Council for England* whose names begin with letters from H to O inclusive. Any person whose name falls within those letters who has not received a circular should communicate with this office at once. 3. Anyone who is doubtful whether his address is correct should write to the office without delay.

In past years you have kindly done your best to assist me in my efforts to save practitioners from the grave inconvenience of finding that their names do not appear upon the Register because of the impossibility of getting into communication with them, and I hope that you will be good enough to continue to give me the benefit of your valuable assistance in the matter.—I am, Sirs, yours faithfully,

H. E. ALLEN, Registrar.

299, Oxford-street, London, W., Sept. 26th, 1904.

DEATHS UNDER CHLOROFORM AND THEIR PREVENTION.

To the Editors of THE LANCET.

SIRS,—I quite agree with Mr. T. D. Luke in the opinion that the most frequent and usual cause of death from chloroform is syncope. But I am not convinced that the syncope generally arises from two ordinary physiological actions of chloroform: (1) to produce vagus excitability, and (2) to abolish the vascular mechanism which compensates for the mechanical effect of gravity. I believe that the great majority of accidents, whatever their physiological mechanism may be, are accidents by overdose, and the fact that in 60 out of 63 such cases the patient died within the first few minutes of administration signifies, in *my opinion*, "*overdose*" *rather than* "underdose." I freely admit that it is not evidence of overdose. All I contend is that neither is it evidence that there has not been overdose.

I think that Mr. Luke does not realise to the full how suddenly and rapidly an overdose may take place. May I repeat the argument I urged at the Montreal discussion towards the realisation of this important point: "A patient into whom you may pour more or less chloroform vapour during more or less time, but who may not safely hold at any one moment in his body more than 600 c.c. of chloroform vapour. A pulmonary sheet of blood $\frac{1}{100}$ of a millimetre thick and 150 square metres in extent. An inspired volume of air of ten, or say five, litres per minute, carrying at say 5 per cent. of chloroform vapour something like 250 to 500 c.c. of vapour per minute. How soon is the patient liable to be overfilled?" Early death is then no proof of the absence of overdose. But my belief that overdose is the chief—I do not say the sole—factor common to the great majority of deaths by chloroform depends upon other considerations, and principally upon my daily experience of the laboratory. Whereas formerly I, in common with most other physiologists, was accustomed to lose many animals by irregular chloroform anæsthesia, now by regular anæsthesia with chloroform mixture maintained uniformly between the limits of 1 and 2 per 100 I never have a death. Therefore my conviction is complete that before we may inquire into idiosyncrasy, brand of chloroform, or any other unfavourable particularity, we should inquire how much of this most powerful drug has been exhibited. When *this fundamental fact* has been ascertained as far as it can be ascertained, but not before, it will become useful to study the details of favourable and unfavourable circumstances.

The danger of death by reflex arrest of the heart by reason of too little chloroform is not, in my opinion, a substantial danger. I am accustomed to say that we may as reasonably expect a man to be intoxicated because he has taken too little whisky as to be killed because he has received too little chloroform. But once realise that the intoxicating effect of chloroform, as of alcohol, is proportioned to the mass of the reagent, it then becomes reasonable and useful to study details of individual susceptibility.

I am, Sirs, yours faithfully,

Sept. 27th, 1904. A. D. WALLER.

PS.—I am also in agreement with Mr. Luke as regards his favourable opinion of ethyl chloride for rapid induction of anæsthesia, but this is distinct from the main issue.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 24th, p. 918, Mr. T. D. Luke makes a strong plea for ethyl chloride as a preliminary to general chloroform narcosis and gives, *inter alia*, a remarkably optimistic impression of the value of this method of inducing anæsthesia Without doubt we have in this agent alone or in combination one of the most powerful aids to safe and successful narcosis—an agent, be it said, which can be employed by the general practitioner with far greater ease and immensely less danger than any of the other classic drugs, except nitrous oxide gas, at present in use.

My own experience with ethyl chloride has been considerable and I was early impressed with the necessity of supplying simple apparatus for general use. To this end I constructed a fixture as follows. I took the ordinary ether bag with valved angle mount and fitted this to a large face-piece, lining the latter with a circlet of lint about seven inches in diameter, and kept in position by a spring collar driven into the apex of the face-piece. This fixture was shown by Messrs. Arnold and Sons at the meeting of the British Medical Association this year. Nothing additional is needed but the spring collar. I feel sure if medical men generally were only aware of some simple contrivance of this kind they would be induced to give trial to ethyl chloride. It is not a little surprising that, in spite of the many obvious advantages to be gained by anæsthetising with this drug, so few men really take it up *con amore*. For long dental cases and operations in and about the naso-pharynx it is an ideal anæsthetic. The difference between 40 seconds (maximum N_2O allowance) and 90 seconds (average ethyl chloride allowance) permits an operator to work with greater deliberation and success. The temporary loss of cough reflex is of no practical importance and as the sitting posture is the one best adapted to *this narcosis* hæmorrhage is always well in view and under easy control. Many operations (on the eye, the nose, the throat, &c.) can be, and are, readily undertaken in the consulting-room with ethyl chloride, and the marked absence of congestion in the soft tissues is an invaluable gain to the surgeon. Long familiar with ordinary ethyl chloride as a freezing agent in minor surgery, many people still incline to the belief that gross impurities also exist in the various brands on the market prepared for general anæsthetic use. It may be said at once that ethyl chloride of British manufacture is thoroughly trustworthy, and I feel sure that any practitioner who will give his close attention to this drug and make trial of it in suitable cases will be more than satisfied with the results obtained. I am, Sirs, yours faithfully,

A. DE PRENDERVILLE,
Anæsthetist to the London Throat Hospital, W.

Weymouth-street, Sept. 27th, 1904.

To the Editors of THE LANCET.

SIRS,—In common with Mr. Thomas D. Luke I have come to regard the ethyl-chloride-ether sequence followed by a mixture of ether and chloroform in prolonged cases as the safest, most rapid, and most convenient method of inducing narcosis. Chloroform unmixed with ether I rarely give; in my last 750 administrations pure chloroform was *found to be necessary in less than* 3 per cent. of the cases. Be the explanation what it may, the fact remains that chloroform is the most dangerous form of anæsthetic in general use and no amount of ingenuity in making elaborate machines for its administration can ever divest chloroform of its dangers. Tersely stated, Mr. Luke's recipe for preventing deaths under chloroform naturally consists in omitting the chloroform. As regards the form of inhaler for administration of ethyl chloride it is not yet generally recognised that a Clover inhaler is admirably suited for administration of all the anæsthetics in common use, including mixtures of ether and chloroform or chloroform alone, the bag, of course, being removed. Ethyl-chloride can be administered satisfactorily from any inhaler which possesses a facepiece and a bag, provided the administrator knows how to administer ether from a similar apparatus.

I have been repeatedly assured, with all due solemnity, by practitioners of many years' standing that they prefer to give

chloroform rather than ether On further inquiry I usually find that the preference for chloroform is really a case of "Hobson's choice The practitioner has only given ether a few times as a student some 20 or more years ago, or perhaps not at all, and in saying that he prefers to give chloroform he means that chloroform is the only anæsthetic with which he feels moderately sure of being able to anæsthetise the patient The real reason why chloroform with its discreditable death rate is so largely used is because a large percentage of practitioners do not know how to anæsthetise a patient with ether Fortunately the public are beginning to appreciate the relative safety of ether over chloroform so that in time medical men will be obliged either to learn how to administer ether or to run the risk of losing their patients Medical men who lecture to the laity on such subjects as "ambulance and first aid might with advantage substitute for the differential diagnosis of the various forms of unconscious ness and the diagnosis of fractures and dislocations a few plain remarks on the relative safety of ether over chloroform as a general anæsthetic especially in dental cases I am Sirs yours faithfully

Plymouth Sept 25th 1904 C HAMILTON WHITELORD

FEVER IN CHILDREN CAUSED BY CARBOHYDRATE FOODS

To the Editors of THE LANCET

SIRS —I am sure Dr Henry Davy's paper in THE LANCET of Sept 24th on the above subject has been read with interest by general practitioners whose work lies in any considerable degree amongst children For myself the article had an enhanced interest in that I have been keeping under observation a series of these cases with the hope of describing them later the condition being one that comes more within the range of the general practitioner than of the consultant Experience tends more and more to convince me that there is one factor seldom, if ever absent in these attacks—a factor to which Dr Davy makes but passing allusion—the presence of adenoid vegetations in the naso pharynx Dr Davy does not make it clear whether his encounter with the 'very eminent throat specialist who offered to remove his son's adenoids was a casual one and his offer purely speculative or whether a digital examination was made of his son's naso pharynx this being the only reliable test for determining their presence or absence He gives however the suggestive history of a severe attack of croup at two and a half years of age and of 'colds during which he had a 'croupy cough' and was feverish occurring frequently until he was seven years old, also of the severity of an attack of whooping cough and of the febrile attacks thenceforward becoming worse This is a type of a common collateral history of adenoids

The process by which these growths cause such febrile digestive disturbances is simple to explain Thorough mastication with saliva is essential to the proper digestion of starchy foods and if the patient uses his mouth instead of his nose for respiration he is apt, in order to get his breath to [illegible] In addition to getting [illegible] starch along with [illegible] ned by Dr Eustace Smith (jams, sweet cakes, carrots and the like) the stomach is receiving from the nasopharynx a continuous trickle of mucopurulent secretion Anyone who has removed adenoids knows the oftentimes most offensive cheesy matter which has accumulated in the crypts of these growths Yet another factor to be considered is the increasing tendency of parents to ply children who do not seem to thrive with the various non semi, or wholly predigested starchy patent foods now so largely and persuasively advertised (Dr Harry Campbell makes some original and suggestive remarks in this regard in his article on the Evolution of Man's Diet in the current issue (Sept 24th) of THE LANCET) What more is required to [illegible] ent in digestion and assimilation [illegible] arynx is, however, as striking [illegible] vertheless, the febrile attacks [illegible] at once Habits of efficient mastication are not established immediately nor does stomachic dilatation become reduced forthwith But the attacks are, as a rule much less severe and tend to pass off as the child develops and possibly as Dr Campbell's "lost pharyngeal reflex (which I have looked for in vain in my own children) [illegible]

There is a type [illegible] ten febrile which bears a cl [illegible] respects to the foregoing and which occurs in children of neurotic diathesis who may have no trace of adenoids They are apt to follow any nervous excitement such as a children's party, and are commonly attributed by the parents to the consumption of indigestible cakes I think that in these cases the cause is to be found in the baneful influence which excitement exerts on the digestive secretions and in the tendency under the same influence to bolt food without mastication probably also there is some pyloric spasm They differ from the form associated with adenoids in the febrile element not being so marked in their more rapid response to treatment by dieting rest and hepatic stimulants and in the absence or [illegible] In the adenoid type moreover, [illegible] ne element as evinced by the [illegible] ial and often offensive perspiration about the head and upper half of the trunk &c Further [illegible] more unless the child is living under the most favourable conditions such as holiday making or careful dieting there is in the adenoid type such evidence of digestive disturbance as poor or ravenous appetite between the attacks whereas in the purely neurotic type it is commonly normal I submit the foregoing observations as the outcome of my own experience believing them on that account to have some measure of value I trust that so distinguished a physician as Dr Davy will not think me presumptuous or be in any way offended at the criticisms I have made bold to offer [illegible] paper

[illegible] L R C P Lond

Hampstead Sept. 24th 1904

THE BOILING OF MILK

To the Editors of THE LANCET

SIRS —In THE LANCET of August 27th Sept 10th and Sept 17th you print several letters more or less hinging on and dealing with the prevention of infantile diarrhœa by treating milk presumably bacteriologically unsound with a view to rendering it fit for the food of the young Dr T R Bradshaw and Mr Cecil Ilevis advocate the addition of preservatives to milk which appears to me to admit failure and surrender of human ingenuity to circumstances over which greater control ought to exist Dr A S Grunbaum very properly seriously calls in question the proposal of the above gentlemen Dr J M Fortescue Brickdale and Mr R Bevan appear to advocate the boiling of milk as the simplest and best means of rendering it less toxic and pathogenic Dr R Hingston Fox deals with the risk of scurvy as the result of patent foods and boiled milk and the same is mentioned by Dr Fortescue Brickdale and Mr Bevan As for boiled milk alone causing much scurvy or rickets time and space preclude lengthy discussion but I can confidently join issue with and strongly deny that boiling of milk is a considerable factor if indeed a factor in the causation of scurvy I consider the question of boiled milk and scurvy the classical example in medical circles of a little knowledge being a dangerous thing The other day I met a junior member of the profession who had just had seven deaths in a month from "infantile diarrhœa and was lamenting his fate I asked

him what he had done and he said that he had tried all the patent foods and that they were "no good" (most of us can remember the time when everybody's patent food "cured" infantile diarrhœa—according to the proprietors). I suggested the efficacy of "boiling the milk" and *every feed* of milk. He retorted that he was told in hospital that boiled milk caused scurvy rickets, &c. I asked him if he had ever seen a case from boiled milk and he said "Well, not that he could really rely on." My reply was, "Well, you have seen seven deaths from 'unboiled' milk." He was also astonished to hear that during my 15 years' close observation of the feeding of infants in private and hospital practice I had not seen one single case due to boiled milk; *verb. sap.* So long as we have two schools of thought—the boiled-milk-scurvy-rickets school and the other-side school—so long shall we have a heavy infantile death-rate from diarrhœa. In my book "Intestinal Intoxication in Infants"[1] I dealt fully with every problem commonly arising in the etiology, prevention, pathology, and treatment of infantile diarrhœa, and the materials were gleaned from a prolonged experience of private and hospital practice and many of the facts stated were the result of original research carried out during the greater part of my medical career. This emboldens me to join in this discussion and to make a suggestion which I have been putting into practice lately with success.

The putrescibility of milk—ordinary cow's milk—is the factor to be dealt with. Why not get rid of this by removing the "water" from the milk, and by using a good, sweet, natural, soluble, and palatable milk powder put an end to the summer-heat and ignorant-person difficulty? During June, July, August, and September, when the earth thermometer reaches a well-known elevation, is the time when milk is most lethal to infants. Why not feed the children of the poor and ignorant, who cannot carry out sterilising directions efficiently, on dried milk powder? Indeed, why not feed all children on dried milk during the heat of summer and at other times if necessary or desirable? Dried vaccine, antidiphtheritic serum, and antivenene can be preserved dry and yet be efficient. Why not do the same with milk? Hitherto it has been impossible to obtain a soluble, non-cheesy, non-mawkish, cheap milk powder.

Messrs. Freud and Co., of 19, St. Dunstan's-hill, London, E.C., have provided me with a soluble, fresh, palatable, and cheap natural milk powder which I have used with much success, and they will, I am sure, send samples of the same to those of your readers desiring it. This milk powder has the following advantages: (1) it is cheap; (2) it can be prepared as a food very quickly; (3) it can be kept and transported to places where milk is difficult to obtain; (4) it will keep sweet and fresh for long periods of time; (5) pure milk can be made from it at all times; (6) it ensures the infant getting a "warm feed" and a non-poisonous one; (7) no more need be liquefied than is needed for a feed; (8) it is as nutritious and safe as boiled fresh milk and less dangerous than the average milk in most houses; (9) it cannot if kept dry be easily contaminated; (10) it can be used in any proportion as regards its albumin, fat, sugar, and salts; (11) it can be used to prepare "humanised milk"; (12) it is prepared from fresh, sterilised, natural milk without precipitation and by the instantaneous evaporation of its water only, &c.; (13) I have not yet come upon any sound objection to its use; (14) it is better than many samples of ordinary milk, for it is safe bacteriologically; and (15) it can be used turn about with good new milk, if new milk is scarce or is unobtainable, as during a hot night in summer. I trust that the above suggestions will provide material not for controversial purposes but to afford some means of combating what is, indeed, the most deadly scourge of infantile life.

I am, Sirs, yours faithfully,

F. W. FORBES ROSS, M.D. Edin., F.R C.S. Eng.,
Gower-street, W.C. D.P.H. Lond., &c.

[1] Rebman, 1897, London.

A VERY SIMPLE CONTRIVANCE TO AID MYOPIC AND OTHER FAILING EYES, ESPECIALLY IN READING.

To the Editors of THE LANCET.

SIRS,—As with failing eyesight I have received, especially in reading, for some years very considerable assistance from a very simple contrivance it may help some of your readers over a difficulty if I state very briefly and in quite simple terms what I have in view without subjecting it to any discussion on grounds of priority, as no doubt it has occurred to many people before. My eyes have been very myopic all along and have required very strong concave lenses which, however, modified by the process of aging, kept me very comfortable and in a certain sense as well off as the average man up to about ten years ago when a separation of the retina occurred in the left eye which entirely destroyed it for practical purposes and left me dependent for vision on the other eye in which I found there was a commencing, but happily not a perceptibly advancing, cataract. The problem therefore now is how to use the remains of power in this right eye so as to persevere as much as possible with my reading which, owing to my other infirmities, is more and more important for me as an occupation. Ever since the commencement of old age I have found that reading is best done without any lens and at a distance of four or five inches from the page. It is by economising and aiding this limited visual power that I find the contrivance above referred to is of the greatest use. It consists simply of a conical tube of light pasteboard material so prepared as to have diameters at the side applied to the eye of two and a quarter by one and a quarter inches, while the diameters of the opposite end of the cone (the one nearest the book) measure one and a half by one inches, the length of the cone being approximately two and a half inches. The machine is held in place by a simple bit of elastic and is so cut as to be adapted to the eye of the side on which it is applied and blackened within by some opaque application shutting off all accidental or useless rays. To prevent undue friction the edge next the face is guarded by a little velveteen and so the job is at once complete and anyone can either make it for himself or get it made at any stationer's. Were there any demand for such articles they might easily be turned out at a cost of a few pence. The service done is entirely by shutting off side rays and limiting the vision in area with corresponding distinctness in detail. I can most truly say that for the last year or two this little invention has enabled me to continue a reader even of very moderate-sized print under the difficulties above referred to.

I am, Sirs, yours faithfully,

Sept. 24th, 1904. W. T. GAIRDNER.

THE HYGIENE OF THE BARBER.

To the Editors of THE LANCET.

SIRS,—In connexion with your article upon this subject in THE LANCET of Sept. 24th, p. 902, I should like to be allowed to point out that although the regulations which you suggest if strictly enforced would reduce to a minimum the risks which are now to be met with in a hairdresser's shop there are still two other ways in which partial safety is to be found, at any rate in so far as hair-cutting is concerned. One way is by the establishment of visiting hairdressers who would use the personal brushes and combs of those they operated upon. I know of at least one hairdresser who gave up his shop and arranged with his customers to call upon them periodically at fixed dates. His charges were not raised, for he frequently attended upon several members of the same family at one visit and I believe he managed to make a fair income. Another way is to carry out a practice which is even now adopted to a limited extent, and that is to take one's own brush and comb when paying a visit to the hairdresser.

I am, Sirs, yours faithfully,

Sept. 27th, 1904. HERBERT JONES.

THE HOLMAN TESTIMONIAL FUND.

To the Editors of THE LANCET.

SIRS,—At a meeting of the committee held this afternoon it was decided to close the fund in a fortnight from the present date. In the meantime I may so far anticipate the final report as to state that the amount received will leave a net balance of a little over £400 to be expended on the object to which it was decided that the fund should be devoted, the erection of a room in connexion with Epsom College which will be a reading-room for the boys out of school hours and will also serve as a studio in which drawing may be taught while they are in school.

The original estimate was £500 and while £400 can be made to serve the purpose it is greatly to be desired that the comfort and convenience and appearance of the room should

be enhanced by a little extra expenditure There must still be medical men who would wish to take part in the re cognition of Sir Constantine Holman's valuable services, local and general, to the profession and the public, and more particularly of his g work on behalf of the Epson at they will send their subscript. H Galton,
Ohunam, Sylvan road, Norwood, S E, without further delay I am, Sirs, yours faithfully,

Brook-street, W, Sept. 27th 1904 W H BROADBENT

LAYMEN AND ELECTRICAL TREATMENT

To the Editors of THE LANCET

SIRS,—Away from the pretentious attributes "skilled" and "trained" in which Dr E Stanley Smith has enchased these worthies like so many flies in amber, the laymen who under the ægis of a mythic professional supervision practise electro therapeutics are nothing if not unqualified assistants The modicum of medical knowledge which they po sess is infinitely less than that which formed the stock in trade of the scorne of our medical schools who erstwhile recruited the ranks of the unqualified assistant The latter at least had a smatter of something more than the rudiments of "picture book" anatomy In many cases their course of study was the full curriculum required of all desirous of obtaining a qualification, yet they, nevertheless fell under the bar of the General Medical Council

It may perhaps be objected that these unfortunates can still be legitimately employed in any minor capacity, where strict attention to prescribed detail and not initiative are the postulata of service From these premises it may be argued that the services of a non medical electrician can be to a like extent made use of Unfortunately, the validity of such an argument must ultimately depend on the degree of parallelism that can be established between the two cases In order to do so it is requisite that the physician who prescribes elec trical treatment should possess an adequate knowledge of the remedies he wishes to employ and, further, that he prescribes them with the same careful attention to detail as in the case of drugs The art of prescription writing does not consist in simply informing the dispenser of the drugs one wishes to use It demands that the special preparation of each drug selected for administration be mentioned as well as the exact dose which is considered most suitable Other details as to adjuvants, correctives excipients, order of admixture, &c, must also be set forth, along with careful instructions as to the quantity of the mixture that constitutes a dose and the interval of time that must be allowed to elapse before its repetition To prescribe electrical treatment without the same careful attention to detail exposes the physician who adopts this unmethodical course to a charge of covering, inasmuch as his direc tions are incomplete and leave more or less of the details of technique to the discretion of the lay assistant he employs to administer treatment In an electrical prescription the exact nature of the current, its frequency of interruption or alternation its tension, and amperage have first to be mentioned These directions require to be supplemented by full details as to the method of application—in high frequency electricity alone there are no less than 23 of these—the kind of electrodes their dimensions, their position relative to the nerves and other structures and to each other, this demands a knowledge of the differences of effect between an ascending and a descending current, &c To attempt to prescribe electrical treat- [illegible] the indi [illegible] ts of the [illegible] application, &c, is nothing else than *arrant quackery*, even though the prescriber be a duly qualified physician I leave you to judge whether this or [illegible] a qualified man undertaking the routine treatment of such cases is more derogatory to the dignity of the profession

Dr Stanley Smith's main objection to the qualified man who specialises electro therapy is that he exercises his judgment in the selection of cases for treatment It is, indeed, strange that the sterling integrity and self sacrificing honesty of the qualified medical electrician do not appeal to his sympathies, more especially as he makes expense one of his standpoints He appears to resent it and contends "that skilled knowledge of a special line of treatment does not put the electric practitioner in possession of all one's reasons for desiring a certain line of treatment in a particular case"; as if the fatuous reasons of an ordinary practitioner can weigh down the experience of an expert whose knowledge of the possibilities and limitations of electrical treatment is, to say the least, more extensive Speaking of ethical principles, one cannot do aught else than admire the candour of his admissions The electric expert, "of course, absolutely discouraged the patient, thereby preventing her giving electrical treatment a trial of sufficient duration to convince me of its value or otherwise in her case Had I sent this patient to a lay electrician acting under my own instructions she would have continued the treatment as long as I thought it worth while" Gauged by the expert's opinion, the possibilities of such an experiment turning out an absolute failure, if nothing worse, are large

I am, Sirs, yours faithfully,

Leytonstone Sept 17th, 1904 CLARENCE A WRIGHT

SOME POINTS IN THE PREVENTION OF EPIDEMIC DIARRHŒA

To the Editors of THE LANCET

SIRS,—Will Dr J T C Nash kindly inform your readers why so many breast fed infants are suffering from diarrhœa now? I treat several such daily and although the mothers are instructed to wash the nipples before and after each feeding and to wear absolutely clean material next to the nipples this does not appear to improve matters His fly and dust infection of food theory in THE LANCET of to day does not cover these cases I am, Sirs, yours faithfully,

Sept 24th 1904 PRACTITIONER

A ROYAL SOCIETY OF MEDICINE

To the Editors of THE LANCET

SIRS —Now that the Faculty of Medicine of the University of London is an established fact is the time not ripe for the consideration of the question of the organisation of a *Royal Society of Medicine* by the amalgamation of all the medical societies of London—some 25 in number—in one home, each one of which would be a division of one great Royal Society of Medicine? There being some 25 societies there would be required five rooms for each society to hold a meeting one night a week There would also be provided one large hall in which the whole of the societies could meet on occasion for the discussion of common subjects The office of president of the Royal Society of Medicine would be a much coveted honour and each society, as at present would have its own president and secretaries A great library common to all the societies would be a necessity Financially an equitable arrangement could be arrived at and the money for construction and organisation obtained by the disposal of the present premises of the many societies

I am Sirs yours faithfully,

Sept. 26th 1904 F R C P LOND

THE CITY ORTHOPÆDIC HOSPITAL

To the Editors of THE LANCET

SIRS —The situation in which the City Orthopædic Hospital, Hatton garden has been placed by the unnecessarily hard action of the Metropolitan Hospital Sunday Fund, as described by Lord Mansfield's letter, is one which calls for [illegible] the splendid work which this [illegible] treatment of bodily deformities [illegible] be carried on The only reason for the withdrawal of the large grant of the abovementioned Fund is that the governing body of the hospital, after full consideration, refused to agree to a suggestion of amalgamation which in its opinion would make the hospital less efficient for its special work and would involve the enormous expenditure of subscribers' money without making more effective but rather interfering with the work for which it was given Against the [illegible] of the hospital not a word [illegible] facts in mind it ought not [illegible] to make a successful appeal, [illegible] who wish to see the work continued but also to all lovers of fair play who would not like to see the busiest orthopædic hospital in London wiped out by the arbitrary behaviour of the supporters of a scheme the

advantages of which have by no means been clearly proved. In appreciation of the good work done I am pleased to offer Lord Mansfield a donation of £100, provided that nine others will give a similar sum. I feel that these could easily be found if only the facts of the case were put before a sufficiently large number of people. I therefore ask you to give this letter and challenge as prominent a place as you can in your journal.

I am, Sirs, yours faithfully,

X. N.

Sept. 22nd, 1904.

MEDICAL NOTES FROM THE FAR EAST.

(FROM A SPECIAL CORRESPONDENT.)

(*Continued from p. 922.*)

Nagasaki, August 8th, 1904.

BY the courtesy of the Minister of Marine I received special permission to visit the naval hospital at Sasebo, four and a half hours' journey by rail northward from Nagasaki, but in the same south-westernmost island, Kiushiu. Sasebo is the chief naval base, at least in the present war, being possessed of a large, deep, and completely land-locked harbour closely surrounded by hills and situated on the coast nearest to the scene of operations. The other chief naval stations and the only other naval hospital of importance are in the Inland Sea, the hospital being at Kuré, a larger growing naval station, an hour by boat or rail south of Hiroshima. Sasebo is under martial law and every foreigner on the railway is cross-examined by a police-officer. The essential feature of the work at Sasebo is that 90 per cent. of the cases of ordnance wounds are inflicted by shell and not by bullet. Here then for the first time in history the science of shell-wounds is being studied under good modern conditions. For in South Africa hardly 5 per cent. of wounds, even early in the war, were inflicted by shell, and these were scattered up and down the country through a dozen different hospitals, so that a concrete study of their peculiar features was impossible. In the Spanish-American and Chino-Japanese wars there were few casualties from artillery. Wars previously to that date have no practical interest to the modern surgeon, as they have little to the modern artilleryman. So that although Surgeon-General K. Totsuka, F.R.C.S. Eng., who received me, had on his table Mr. G. H. Makins's book, the American official reports, and their own medical report on the war with China he had been unable anywhere to find any paper dealing with modern shell wounds. Even in Sasebo they do not get all the cases of shell wound in the navy, for over 30 have gone to the Kuré Hospital. And during the whole war so far there have been under 180 cases of shell wound in the navy brought to Japan. That means that under 180 have survived. But 145 of these have been at Sasebo and are brought there directly by naval hospital ship from the Port Arthur fleet in two days; so that they have been under proper observation and care from the very first. The report of the naval medical department, therefore, on the conclusion of the war will make a definite addition to modern surgical knowledge and is sure to be interesting reading, the more so as the three surgeons-general in the navy know English well, and I think I am right in saying that Baron Saneyoshi, their present director-general, like one of his precedessors, Dr. K. Takaki, who reorganised the sanitation of ships in the navy and abolished the scourge of beri beri, and his colleague, Surgeon-General Totsuka, is a St. Thomas's man and F.R.C.S. Eng. The director-general ranks as a vice-admiral, with two small stars on a broad gold stripe down the shoulder-strap. The other two naval surgeons-general rank as rear-admirals with one small star on a broad stripe of gold. The lower ranks of medical officer are called doctor and rank with navigating officers according to seniority. Captains of first and second grades and commanders wear three stars, two stars, and one star respectively between two narrow stripes of gold; first and sub-lieutenants and probationary officers wear three stars, two stars, and one star respectively on a single narrow gold stripe.

The difference between shell wounds and bullet wounds is absolute. The effect of the bullet depends on what important structure it may strike—bone, nerve, artery, or viscus. The treatment is the treatment of the bone, nerve, artery, or viscus injured. Without the bullet striking one of these structures the wound, if it be properly protected from the first, will heal by primary union. The effect on skin, fascia, and muscle is negligible. The effect of the shell, on the other hand, is a laceration either of a whole limb or the trunk as a whole, or else of the surface only. If it penetrates to the viscera it is almost invariably fatal. The wounds of those who survive to reach Sasebo are either surface wounds or mutilations of a whole limb. The treatment is usually either amputation or treatment of a superficial lesion. Treatment of individual bones, nerves, or viscera is extremely rare. Arterio-venous aneurysms are hardly conceivable. Penetrating fractures of the skull and [illegible]s of the abdomen do not occur, at least to [illegible] hand. The only visceral lesion that the naval surgeon may occasionally have to treat is a wound of the thorax carrying away a bit of the thoracic wall and damaging lung and pleura. One such case I saw. The man was wounded three months ago in the lower part of the right chest in the axillary line. But as there was a good opening from the first there was no room for the collection of blood, serum, or pus in the thoracic cavity. The only untoward result has been a certain amount of dry pleuritic adhesion and an irregular but not very large scar.

During the six months of the war there have been at Sasebo two cases of pneumothorax in which a shot, either bullet or shrapnel, remained in the chest, and two or three cases in which it had passed through and out again. Cases of gunshot wounds from bullet or shrapnel in the navy nowadays must almost invariably indicate fighting on land and these cases were incurred by men landed from the ships to assist in the fighting round Port Arthur. *It is seldom* now that ships of war approach each other near enough to make it worth their while to fire shrapnel. For the object of shrapnel is to kill or wound men, not to injure ships, and the aim in modern naval fighting is essentially to sink or to damage ships. In Nelson's days naval battles were necessarily at what we should now call close quarters and it was an attainable object to sweep the decks and to tear sails and rigging with musket and shrapnel fire so as to deprive the ships of all control. Now with torpedoes and long-range guns, with machinery instead of sails, and the whole protected in armour-plated bulwarks, conning-towers, barbettes, and 'neath decks below the water-line, the only methods of disabling a ship are to ram, to torpedo, or to breach the steel protection with heavy shell. Wounds on board ship therefore are usually the result of ragged splinters and sections of shell, but torpedo vessels the plating of which is under $\frac{3}{16}$ths of an inch thick offer little protection to their crew and may occasionally be subject to raking shrapnel fire. Shrapnel wounds differ from rifle-bullet wounds in having a special tendency to suppurate. The only case of shrapnel wound I noticed as of interest in the wards was that of a man hit a fortnight ago in the fighting round Port Arthur, in which the shrapnel bullet passed in behind the shoulder and was buried there; while another passed across the front of the elbow without touching bone, nerves, or artery, entering below the internal condyle and making its exit an inch above the external condyle. There was not a single case of penetrating abdominal wound. Head wounds were limited to scalp wounds or fracture of the face bones; there was one case in which a depressed fracture had been successfully treated by operation. The other cases noted were all of limb wounds.

[We have received from our correspondent minute clinical descriptions of cases which want of space will only allow us to publish in part. Accompanying the clinical details were photographs which we are unable to reproduce for the same reason. For these photographs our correspondent was indebted to the kindness of Dr. Habuto, the surgeon in charge of the photographic work.]

Very few cases had been serious enough to need amputation, from which fact two surgical inferences may be drawn—namely, (1) that few hopeless lacerations of a limb survive; and (2) that conservative surgery is now an attainable ideal in almost all cases that reach hospital. The myth that surgery on a battle-field consists of amputations and ligature is fully exploded.

I saw one arm stump and one leg stump. In the latter, which was the result of an amputation through the knee-joint, the artificial limb, light and well-made with good thigh-piece, waist-belt, and knee, ankle, and metatarso-phalangeal joint complete, had just been given its first or second trial. These limbs are made, of course, in Japan—whose carpenters, joiners, and cabinet-makers can hardly be equalled elsewhere—and are presented by the Empress of Japan. A man who suffered from clean-cut wounds

behind the elbow and in the posterior axillary fold had probably been struck by a shrapnel shot. He belonged to the *Shikishima* and was one of the many hundred who volunteered, and of the few who were selected, to take the six tramp steamers into the mouth of Port Arthur harbour and to sink them there in the face of a perfect typhoon of artillery from ships inside and forts above. He, however, survived to be nursed by Mrs. Totsuka, wife of the Surgeon-General. This lady wore the serviceable white uniform of all who nurse under the Japanese Red Cross. The female nurses employed in military hospitals are all engaged and paid by the Red Cross Society of Japan and many Japanese ladies are in this war for the first time admitted to help in the work, although their assistance is now restricted to the rolling of bandages and the fabrication of first field dressings. The social importance of this development can hardly be appreciated in England. The Red Cross uniform for nurses is simple and neat, consisting of a fairly full white cotton overall tied with white cotton sash round the waist, with a starched cap of the same material which, though hardly becoming, has the merit of confining those stray locks that not infrequently prove a source of anxiety to the aseptic surgeon. This cap usually bears on the forehead the distinguishing mark of a plain scarlet cross.

Five fatal cases have occurred in the hospital during the war. Deaths, it is commonly understood, are now of rare occurrence on the surgical side of a military or naval hospital, a change due to Lister's and Pasteur's work. And the further removed a base hospital is from the scene of operations the more complete should be the sifting out of all serious cases before they are sent down the line or across the sea to that base. But this is less so on sea than on shore; for the wounded at sea find the analogue of a field hospital in their hospital ships, which might just as well convey them to the base as remain with them in the neighbourhood of naval operations. One of the patients who died in the hospital was wounded by a shell on board the *Fuji*, his injuries consisting of a wound through the left popliteal space and the upper part of the right calf. Double gangrene set in and death occurred on the day after admission, no operation having been possible in the circumstances. After the event one has a suspicion that it might have been worth while to cut down on the site of the wound in each leg on board the hospital ship, as the gangrene may have been due to the pressure of extravasated blood and not to mere severance of the artery.

There was one interesting case of double injury from a single wound, where a splinter of shell had injured both ulnar nerve and flexor tendons, resulting in the hand being fixed in a modified position *en griffe*, with slight wasting of the interosseous muscles. For this case an operation for suture of nerve and loosening of tendons, with subsequent early movement and massage, although perhaps indicated, would be both difficult to carry out and of doubtful prognosis.

Shell wounds, then, are mostly lacerations of the soft tissues. But there is a further effect which is coming into increasing significance with modern artillery. When a shell bursts all men within a radius of several yards are in severe danger of burns from the explosion. When watching the artillery duel in the battle of *Tashichiao*, every shell explosion towards dusk appeared to us, 15 miles away, as a flash of light half as high as the hills on which it exploded and as broad as it was long. [illegible] light cannot have been one- [illegible] and extent suggest the injur[illegible] have had a very large number of cases in which burns have complicated wounds or have constituted the sole injury. These burns are clean, at least to the naked eye, and of varying depth down to the fourth degree. I did not see or hear of any case of charring or of bone being exposed and this would not be expected considering the short duration of the flash. Their treatment is the same as for ordinary burns; picric acid is occasionally used, especially for wounds that have become sluggish, but the routine treatment is the application of aseptic gauze, changed only every other day. This method has the advantages of the absorbent gauze and of the rest which allows fresh, delicate granulations and new skin after two or three days to resist removal with the dressings. Whether these would outweigh the apparent disadvantages it was impossible to determine at the time. The wounds have healed well and so far there has been no case of complication or after-effect. The scar is simply lighter in colour than the surrounding skin.

This hospital of 600 beds, at present only half full, is built in ten pavilions of light grey wood plastered on the inside roofed in grey tile, simpl[illegible] varnished deal or its Japane[illegible] feet above ground on brick [illegible] floor-level and beneath the floor, and connected together by raised wooden corridors with overhanging roofs and wooden sides three feet from the ground. The spacious operating theatre, simply built with a proper view, to light, space, and cleanliness, measures 20 feet by 30 feet, with walls 12 feet high, and the roof rising another eight feet to the centre of the room. Commendation of a simple theatre may perhaps be challenged, but there is, without a doubt, much to be said in favour of simplicity in theatre construction, seeing that, so long as no dust or other solid or fluid can accumulate, cleanliness of hands, dressings, and ligatures, and a careful aseptic method in operation and after-treatment are all-sufficient to prevent suppuration. If this be so it is best to have a cheap theatre which can be replaced at slight cost to suit the varying needs of successive surgeons and successive stages of scientific opinion and can be multiplied so as to permit of each surgeon having his own theatre as he has his own wards, rather than to spend money [illegible]

[illegible] exception of two in the University Hospital at Tokyo, is universal in the poor and practical country of Japan.

The Japanese surgeons, however, have imbibed from the Germans a rooted suspicion of tap water, even for the washing of their hands, and in Sasebo, as in all other hospitals, a complete apparatus for the sterilisation of water is considered an indispensable adjunct to the theatre. This is a logical tenet peculiar to the extreme aseptic school. In preparing for operation they wash their hands assiduously with soap (? sterilised) and sterilised water, following this procedure with the use of spirit, and although it was admitted that they did occasionally end up by immersing the hands in an antiseptic solution, the solution used proved to be a watery solution of perchloride of mercury which is unable to penetrate the fatty elements of the skin and is virtually useless. The dressings used are similarly aseptic gauze, wool, and bandages, sterilised on the spot immediately before use. The ligature in almost universal use is silk. The Sasebo surgeons belong, in fact, to the extreme aseptic school. Whether their results justify their methods or condemn them it was impossible to decide, although another hospital of no less importance has undoubtedly had more than its fair share of suppuration during the months in which my informant, with a considerable experience of American surgery, has worked in it. The struggle between rival methods is a mere question of bacteriological fact.

A shipload of patients had just been admitted and we went into the dressing-room to see the wounds being carefully examined, diagnosed, and recorded. Two or three of the chief officers engaged were in sterilised overalls and their method was complete, a pair of sterile forceps, for instance, in its transit in sterile tongs from steriliser to operator dropped on to clean mackintosh being rejected. Everything was done promptly and thoroughly, in good order, without the least bustle, worry, or assertion of authority. Discipline here is an instinct.

The only anæsthetic used is chloroform. Local anæsthetics [illegible]

There was a large induction coil giving, however, only a seven-inch spark. There was no localisation apparatus; I believe there is none in Japan; and there are certainly not many cases for which it gives any further information than is gained by the cryptoscope with wire and other marks on the limb to preserve the line and planes for operation.

A large amount of the work of a naval hospital even in war time consists of accidents on board ship, crushes and lacerations from machinery or falling spars, engineering and gunnery tools, and the like. This affords therefore a good field of experience in fractures. It is noteworthy that Surgeon-General Totsuka has almost abandoned the use of wire and screws. Hodgen's splints are unknown, fractured femora being all put up in plaster spicas, even after arrival in hospital, when there is no further question of transport requiring immobility. A compound fracture into the knee-joint was well immobilised in plaster round the thigh and leg, with a five-inch gap for dressings, the bridge consisting of a stout, flat aluminium rod on either side.

places, and (2) by the dangers to the public health from burial-places. The objection that it was a continuation of a pagan custom was met by the statement that no objection to cremation was raised in the Scriptures and that there was no annihilation, only a change of condition as to the constituents of the body, as there was after ordinary interment. The prediction that the number of the cases of poisoning would greatly increase had not come to pass and, moreover, this danger is guarded against by the Cremation Act of 1902. Either the subject did not greatly interest the members or cremation had, in their opinion, obtained an impregnable position, for the paper was not followed by much discussion.

New Sewage Works at Chorlton-cum-Hardy.

Withington's new sewage works at Chorlton-cum-Hardy were formally opened on Sept. 21st. The Chorlton works are part of a large system of sewage disposal which the council was obliged to undertake some years ago at an estimated cost of £165,000. At first land filtration was thought of but objected to and an experimental tank for bacterial treatment was constructed with the result that the system of bacterial treatment was decided on. The capacity of the works will allow of the treatment of the sewage of the large district of the Withington council to the satisfaction of the Mersey and Irwell joint committee. The work is expected to be completed for a little over £164,000—a rare instance of the cost not exceeding the estimate.

Anthrax in Cheshire.

Anthrax has become a serious scourge in Cheshire. Four sheep died suddenly on a farm at Sutton and Mr. Ferguson, veterinary surgeon, Warrington, certified that death was due to anthrax. The carcasses were burnt and the farm premises were "thoroughly disinfected." It is rarely that sheep are attacked by this disease.

The Drought.

The people of Manchester, no less than the members of the waterworks committee of the city council, have for some time feared that the supply of water to the city would have to be curtailed in consequence of the continuance of dry weather. The rate of consumption for some time has been at 35,000,000 gallons daily and a week ago the Longendale reservoirs only had a supply for 37 days, while yesterday it had sunk to enough for 31 days only. On Sunday night both in Manchester and Salford it was turned off at 7 o'clock until 6 o'clock on Monday morning, with the estimated saving of 6,000,000 gallons. Exceptions to the turning-off regulation are allowed in the case of the infirmaries and hospitals and precautions are taken to provide for the requirements of the Fire Brigade if fires should break out. This restriction of water has not been needed since July three years ago, when it had to be continued for four months right up to November. In that year the supply in the reservoirs fell to sufficient for 18 days only. This year the drought has come later and may not last so long.

Sept. 27th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Colour Blindness among Swansea School Children.

THE Swansea school board has only just been dissolved, the last meeting of the board having been held on Sept. 23rd. In the administrative work of this body there is no part upon which the members can look back with greater satisfaction than that which has been carried out by its medical officer (Dr. Rhys Davies) who has recently issued a report giving the results of his examination of the colour vision of some of the boys and girls in the higher standards of the public elementary schools within the borough. Of the boys examined 3·8 per cent. were found to be colour blind but in none of the girls was the defect apparent. In 1901, when 1500 boys from 30 different schools were examined, colour blindness was detected in 5·4 per cent. Dr. Davies points out that colour blindness is almost invariably a congenital defect and not therefore a sign of neglect on the part either of parents or of teachers nor is it an indication of dulness on the part of the child. He states that in more than one school he found several boys who had been taught painting for several years, though they were unable to distinguish red from green. The conclusion arrived at from this extended examination of school children is in accordance with Dr. Davies's previously expressed opinion that in every class of 50 boys there are probably two or three who are colour blind, five or six who are defective in acuteness of vision, and seven or eight who are more or less deaf.[1]

The Housing Problem in South Wales and Monmouthshire.

The inadequate housing accommodation in the colliery districts of South Wales and Monmouthshire has already been commented upon in THE LANCET[2] and details have been given of the steps which have been taken by some sanitary authorities to lessen the overcrowding of houses within their districts. On Sept. 24th there was held at Merthyr Tydvil an important conference of nearly 300 members of trade unions and other labour organisations in South Wales and Monmouthshire when a discussion took place as to the best method of dealing with the housing problem. Mr. Keir Hardie, M.P., presided over the meeting and in the course of his remarks he condemned the building of houses by a sanitary authority for the very poor: he maintained that the class to be catered for was the well-to-do and well-paid workman when the class below them would take a step up and so on. The most practical suggestion made to the conference was that of Mr. D. J. Thomas, the medical officer of health of Merthyr Tydvil, who considered that if the lodger difficulty could be successfully dealt with a very great step would be gained and he advocated the establishment of municipal lodging-houses. There is no doubt that in many places these houses would be a great boon and as they could easily be made to pay their way in the districts where single colliers are earning good wages no subsidy from the local rates would be required. The practical outcome of the meeting was a formal protest against the bad housing conditions prevailing generally in industrial and rural districts. It was also decided to form local committees which should impress upon sanitary authorities the necessity and urgency for making the fullest use of their existing powers not only for the abatement of nuisances and the destruction of insanitary property but also for the erection of comfortable houses for all those who are at prese without them. It was further resolved to represent to t Government the necessity for granting more extended powe to sanitary authorities for these purposes.

Glamorgan County Asylum.

When the Glamorgan County Asylum was established Bridgend in the year 1864 it was intended to serve not on the administrative county but also the municipal boroug of Cardiff and Swansea. The asylum was controlled a joint committee representing these three areas un 1899 when the Cardiff corporation withdrew from t partnership and took steps to provide a separate asylu This institution is now in course of erection. Some mont ago the Glamorgan county council gave notice to t Swansea corporation of its desire to be relieved from t obligation to receive patients from that borough and fro Sept. 29th the Bridgend Asylum will be administer entirely by the county council, although the Swans corporation may if it desires send in patients during t next five years at a fixed rate of payment. The amou which the county council has to pay to the Swans corporation upon the termination of the joint control w settled by arbitration and the corporation is to recei £44,200, but it has to contribute a proportion of t pensions now being paid as well as those which are due the present officials.

Small-pox in Caerphilly.

South Wales has been remarkably free from outbreaks small-pox during the present year, only a few isolated cas having occurred in localities distant from each othe During the second week in September a navvy wh was tramping through Caerphilly—a colliery district i Glamorganshire—was found to be suffering from the disea and he was isolated in the district council's hospital. Eigh days later two more cases were reported and the patient were removed to the hospital.

Isolation Hospital for Falmouth and Truro Port Sanitary Authority.

The Falmouth corporation and Falmouth and Truro por

[1] THE LANCET, Nov. 30th, 1901, p. 1537.
[2] THE LANCET, July 30th, 1904, p. 331.

sanitary authority on Sept 23rd decided to erect an isolation hospital at Budock

Infantile Mortality in Glamorganshire

At the last meeting of the Swansea corporation attention was drawn to the high rate of infantile mortality which prevailed in the borough In 1903 and in the previous ten years this rate was equal to 164 per 1000 births and in the ten weeks ending Sept 10th last the rate was equal to 207 per 1000 births The medical officer of health (Mr Ebenezer Davies) stated that the high temperature which had prevailed during the summer had tripled the number of deaths from diarrhœa among young children but he was also very emphatic in attributing a proportion of the high mortality to the improper feeding of infants upon artificial foods Mr J A Rawlings M R C P Edin who is a member of the corporation said that they could not give too much attention to this grave and serious question and he thought that what was wanted was a more complete inspection of the sources of the milk supply the cowsheds and milking places in the rural districts In his annual report for 1900 the county medical officer of health of Glamorgan (Dr W Williams) stated that the inspection of these premises in most districts in the county was carried out in a very lax manner and when referring to the same subject in his report for 1903 he expressed the opinion that county councils should be endowed with the power to enforce uniformity of control over such an important article of food as milk The medical officer of health of the Llantrisant rural district (Dr W Naunton Davies) in his last annual report describes the conditions which he has observed in some cowsheds where the hands of the milkers are for the most part inadequately washed their nails being long and affording quarters for any amount of objectionable material Even he says if the milkers exercise all possible care with their hands it is extremely difficult to prevent polluting the milk with some amount of manure which is practically smeared over everything in the place Another medical officer of health (Dr W W Jones) states that the conditions of the dairies and cowsheds in the Gelligaer rural district in most instances fall short of the requirements of the regulations made under the Dairies Cowsheds and Milkshops Orders It would appear therefore that Mr Rawlings's adverse criticism upon the state of the cowsheds in the county is quite justified

Sept. 27th

IRELAND

(FROM OUR OWN CORRESPONDENT)

The Irish Medical Association

THE council of the Irish Medical Association has sent a letter bringing under the notice of those who are engaged in the teaching of medical students the present condition of the Irish Poor law medical service It is shown that the average salary per annum in this service is under £100 out of which all expenses necessary to the discharge of his public duties (rent taxes horse and vehicle servants &c) must be paid leaving practically nothing for his own support He must attend on every ticket issued on behalf of any 'poor person' and this elastic term poor person has been so extended as to embrace almost everybody There is no promotion in the service no hope of future advancement no holidays as of right no increment of salary and no certainty of a retiring pension To redress these evils the Irish Medical Association calls on all teachers to explain to students and diplomates the grave mistake they would make in bartering their services for such wretched pittances the acceptance of which involves the honour and dignity of the whole profession The association hopes that each member of the profession will recognise that the acceptance of a less sum than £200 a year for dispensary duty £120 for workhouse or £300 for both combined would not only tend to lower their professional status in the eyes of the public but would prolong indefinitely a state of things which is admitted to be a public scandal

Ulster Medical Society

At a meeting of the members of the Ulster Medical Society held in the Medical Institute Belfast, on Sept 22nd Dr W Calwell was unanimously elected president for the next two years in the place of Professor J Lorrain Smith who owing to his going to Manchester has been obliged to resign

The Constabulary Medical Officers

Dr B O Brien has been appointed medical officer of the district in Belfast rendered vacant through the resignation of Dr W B McQuitty

Royal Victoria Hospital Belfast

A Belfast gentleman much interested in the Royal Victoria Hospital has written to the local press pointing out a fact observed by those living in it that there are practically no flies in the Royal Victoria Hospital wards a circumstance which is a great boon to patients especially in a season like the present when there is an abnormal number of flies in existence

Sept 27th

PARIS

(FROM OUR OWN CORRESPONDENT)

Sanitation in Post Offices

THE Under Secretary of State for Post Offices and Telegraphs has just issued to the departmental directors a circular to be transmitted to all chief post masters of France requesting them to inquire into the general condition of all the post office premises in their department and to inform their sub postmasters that those who fail to keep their offices in good order will be liable to have their promotion delayed In an additional circular the Under Secretary of State describes the methods to be followed by post masters with respect to the sanitation of their offices For the daily cleaning of the various rooms dry sweeping and sprinkling with water are strictly forbidden Of the rooms having tiled floors some are to have the floors flushed with water every day, others are to have the floors flushed with water twice a week and washed with wet cloths daily Parquet floors are every day to be wiped over with hot turpentine sprinkled with damp sand and swept Once a week floors whether tiled or parquet are to be sprinkled with a solution of lysol of 2 per cent strength The cleaning of the front of the premises the windows and the woodwork will continue to be done by contractors Tables desks and telephone apparatus are to be wiped with cloths dipped in a solution of lysol of 2 per cent strength Water closets and urinals are to be kept perfectly clean by frequent flushing and if necessary, by sprinkling with turpentine Placing spittoons in the rooms is strictly forbidden and those which are already in use are to be removed immediately The washing cleaning and sweeping are to be done by the caretakers under the control of the post masters who will supply the requisite antiseptic solutions sponges swabs brooms and brushes The rooms are to be ventilated as freely as possible especially in the absence of the staff

Prevention of Tuberculosis in Barracks

On all sides attention is being given to hygienic measures especially in the army where it is so important to maintain a high standard of general health Tuberculosis is the disease which is most to be feared and the course which has been taken with regard to it in the garrison of Grenoble might be advantageously adopted everywhere In this garrison the medical officers have arranged that when a man is observed to be out of health he shall be weighed at intervals and if his weight is stationary or diminishing a physical examination of him is made especially of his lungs His temperature is taken several times a day for some days even although nothing abnormal has been found If he is out of health and his weight is stationary but his temperature is normal, he is kept under observation and is not put on exhausting duty If he is out of health with loss of weight but no rise of temperature he is placed on the sick list If he is out of health and losing weight with a daily rise of temperature but no physical signs of internal disease, especially in the lungs he is placed on the sick list for three months If he is out of health and losing weight with a daily rise of temperature and suspicious pulmonary symptoms he is given a temporary discharge If he is out of health and losing weight with a daily rise of temperature and affected lungs whether there are bacilli in the sputum or not, he is discharged (Reforme No 2) On this system an improvement may reasonably be expected by sending the men home A man is never sent home in these circumstances without having had fully explained to him the apprehensions which have led to his being placed on the sick list

BOOKS, ETC., RECEIVED.

BALE, JOHN, SONS, AND DANIELSSON, 83, Great Titchfield-street, Oxford-street, W.

Adenoid Growths of the Naso-pharynx: Dia[illegible] Treatment. By G. A. Garry Simpson, [illegible] Assistant, Throat, Nose, and Ear Department, West London Hospital. Price 3s. 6d. net.

DAVIS, F. A., COMPANY, 1914-16, Cherry-street, Philadelphia, U.S.A.

Modern Ophthalmology: a Practical Treatise on the Anatomy, [illegible] Eye. By James Moores Ball, M.D., [illegible] in the St. Louis College of [illegible] I. and II. Price, extra cloth, [illegible]

JOHNSTON, W. AND A. K., LIMITED, Edinburgh and London.

Manual of Gynecology. By D. Berry Hart, M.D., F.R.C.P.E., F.R.S.E., Lecturer on Midwifery and Gynecology, School of the R[illegible] and A. H. Freeland Barbour, M.A., F[illegible] .R.S.E., Lecturer on Midwifery and Diseases of Women, School of the Royal Colleges, Edinburgh. Sixth edition. Price not stated.

KING, P. S., AND SON, Orchard House, Westminster.

Markets, Fairs, and Slaughter-houses. Being a collection of Special Provisions relating to Markets, Fairs, and Slaughter-houses, contained in the Private Acts of Parliament and Provisional Orders obtained by English Provincial Corporations and Urban District Councils in the years 1901, 1902, and 1903. Compiled and arranged by Frank Noel Keen, of the Middle Temple, Barrister-at-Law. Price 3s. 6d. net.

LEWIS, H. K., 136, Gower-street, W.C.

Enlargement of the Prostate, its Treatment and Radical Cure. By C. Mansell Moullin, M.D. Oxon., F.R.C.S., Senior Surgeon and Lecturer on Surgery at the London Hospital. Third edition. Price 6s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAMS, C. B. D., has been appointed Senior House Physician to St. Bartholomew's Hospital.

ANDERSON, C. A., has been appointed Junior House Physician to St. Bartholomew's Hospital.

BIRKETT, H. J. D., has been appointed Junior House Surgeon to St. Bartholomew's Hospital.

BOWEN, H. W., has been appointed Surgeon to the Royal Ear Hospital, Soho, W.

BOYLE, H. E. G., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant [illegible] ew's Hospital.

BREWERTON, [illegible] been appointed Clinical Assistant [illegible] of the Eye, St. Bartholomew's Hospital.

BURFIELD, J., has been appointed Junior House Surgeon to St. Bartholomew's Hospital.

BURROUGHES, H. N., has been appointed Senior House Surgeon to St. Bartholomew's Hospital.

COCKE, R. STURGEON, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Royal Ear Hospital, Soho, W.

COLEMAN, F., M.R.C.S., L.D.S., has been appointed Clinical Assistant to the Dental Department, St. Bartholomew's Hospital.

COLT, G. H., has been appointed Junior House Surgeon to St. Bartholomew's Hospital.

CRIPPS, L., has been appointed Junior House Surgeon to St. Bartholomew's Hospital.

CROSS, W. F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Chloroformi[illegible] [illegible]ital.

CUDMORE, ARTHUR MU[illegible] Eng., has been appointed Surgeon to [illegible] Australia.

DAMMAN, G. W., M.B., Ch.B. Melb., has been appointed a Member of the Local Board of Health at Penguin, Tasmania.

DAVY, THOMAS GEORGE, M.R.C.S. Eng., L.S.A. Lond., has been appointed District Medical Officer at Perth, West Australia.

ETHERINGTON-SMITH, R. B., B.S. Cantab., has been appointed Senior [illegible] ed Clinical Assistant [illegible] St. Bartholomew's Hospital.

FULTON, THOMAS KENSINGTON, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Officer of the Immigration Limitation Act, also Medical Officer of the Palmerston Gaol, South Australia.

GASK, G. E., F.R.C.S. Eng., has been appointed Clinical Assistant to the Department of Orthopædics, St. Bartholomew's Hospital.

GOULD, H. A., has been appointed Resident Midwifery Assistant at St. Bartholomew's Hospital.

HADFIELD, C. F., has been appointed Junior House Physician to St. Bartholomew's Hospital.

HAGGARD, T. B. A., [illegible] been appointed Senior House Su[illegible]

HARRISON, W. H., [illegible] g., has been appointed Officer of the Immigration Limitation Act, South Australia.

HARVEY, HENRY F., M.R.C.S. Eng., L.S.A. Lond., has been appointed Acting Principal Medical Officer and Officer Controlling Sea Quarantine, *pro tem.*, West Australia, also a Member of the Board of Management of the Perth Public Hospital, West Australia, *pro tem.*

HEPWORTH, F. A., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior [illegible] Bartholomew's Hospital.

HOGARTH, [illegible] L.R.C.P. Lond., has been appointed Assista[illegible] Assistant at St. Bartholomew's Hospital.

HORDLE, T. J., M.D., B.Sc. Lond., M.R.C.P., has been appointed Clinical Assistant to the Department for Diseases of the Skin, St. Bartholomew's Hospital.

HORNE, W. JOBSON, M.D. Cantab., has been appointed Clinical Assistant to the Department for Diseases of the Throat and Nose, St. Bartholomew's Hospital.

HOWELL, C. M. H., M.R.C.S Eng., L.R.C.P. Lond., has been appointed Senior House Physician to St. Bartholomew's Hospital.

HUDSON, B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior House Physician to St. Bartholomew's Hospital.

JOHNSON, W. CROSBY, M.B., Ch.B. Vict., has been appointed Honorary Physician to Pendleton Branch Dispensary of Salford Royal Hospital.

JONES, J. M., M.D. Michigan, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

JOYCE, CALEB, M.B. Melb., has been appointed Public Vaccinator at Kanowna, West Australia.

LAMB, WILLIAM, M.B., C.M. Edin., has been appointed Public Vaccinator at Mannum, South Australia.

LEDWARD, H. D., M.B., B.C. Cantab., has been appointed Senior House Surgeon to St. Bartholomew's Hospital.

MACFADYEN, N., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Extern Midwifery Assistant at St. Bartholomew's Hospital.

MURISON, A. LOGAN, M.R.C.S., L.R.C.P. Lond., has been appointed Surgeo[illegible] W.

NELIGAN, [illegible] nd., has been appointed Senior [illegible] w's Hospital.

NOON, L., B.S. Cantab., has been appointed Ophthalmic House Surgeon to St. Bartholomew's Hospital.

OVERY, HARRY, M.B., Ch.B. Edin., F.I[illegible] Casualty Officer and Pathologist to [illegible]

PAYNE, J. E., has been appointed [illegible] St. Bartholomew's Hospital.

PETHYBRIDGE, W. L., M.D., B.Sc. Lond., has been appointed Honorary Physician to the Plymouth Public Dispensary, Honorary Pathologist to the South Devon Hospital, and Ophthalmologist to the Plymouth Education Authority.

PLOWRIGHT, C. T. H., has been appointed Junior House Surgeon to St. Bartholomew's Hospital.

RUDAHAN, T., L.R.C.P.I., L.R.C.S.I., has been appointed Certifying Surgeon under the Factory Act for the Mohill District of the county of Leitrim.

ROSE, F. A., M.B. Cantab., F.R.C.S. Eng., has been appointed Clinical Assistant to the Department for Diseases of the Throat and Nose, St. Bartholomew's Hospital.

ROUND, JOHN, L.R.C.P. Lond., L.R.C.S., has been appointed Physicians' Assistant at the Plymouth Public Dispensary.

SCOTT, S. R., M.B., B.Sc. Lond., F.R.C.S. Eng., has been appointed Clinical Assistant to the Department for Diseases of the Ear, St. Bartholomew's Hospital.

STEVENSON, B., L.D.S. Glasg., has been appointed Clinical Assistant to the Dental Department, St. Bartholomew's Hospital.

THOM, A. P., M.B., Ch.M. Aberd., has been appointed Acting Officer of Health at Geraldton, West Australia.

THURSFIELD, H., M.D. Oxon., M.R.C.P., has been appointed Clinical Assistant to the Department for Diseases of the Skin, St. Bartholomew's Hospital.

VINTER, SYDNEY GARRATT, L.R.C.P., M.R.C.S., L.S.A., D.P.H. Durh., has been appointed by the Postmaster-General Medical Officer to the Post Office at [illegible] [illegible]nding Antony), Devonshire.

WA[illegible] [illegible].C.P., has been appointed Clinical Electro-Therapeutics, St. Bartholomew's Hospital.

WENHAM, H. V., M.B. Lond., has been appointed Senior House Physician to St. Bartholomew's Hospital.

WEST, C. E., M.B. Oxon., F.R.C.S. Eng., has been appointed Clinical Assistant to the Department for Diseases of the Ear, St. Bartholomew's Hospital.

WHITE, E. H., has been appointed Junior House Physician to St. Bartholomew's Hospital.

WILLIAMSON, H., M.D. Cantab., M.R.C.P. Lond., has been appointed Clinical Assistant to the Department for Diseases of Women, St. Bartholomew's Hospital.

WILSON, H. W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to St. Bartholomew's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRECON AND RADNOR LUNATIC ASYLUM, Talgarth, Breconshire.—Medical Superintendent. Salary £450 per annum, with house, light, washing, and garden produce.

BRENTWOOD, ESSEX COUNTY ASYLUM.—Assistant Medical Officer. Terms £150 annually, with board and residence.

BRISTOL GENERAL HOSPITA[illegible] [illegible]Department.

CHESTERFIELD AND NORTH [illegible] DISPENSARY.—Junior House Surgeon f[illegible] per year, with board, apartments, and laundress.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, laundry, and residence.

DOVER, ROYAL VICTORIA HOSPITAL.—House Surgeon, unmarried. Salary £100 a year, with board, lodging, and washing.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Assistant House Surgeon. Salary £25 per annum, with board and washing.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge road, S.W.—House Surgeon. Honorarium £15 15s. for six months, or £40 for [illegible] ence [illegible] miner each in Chemistry, [illegible]

HAI [illegible]

HA [illegible]

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician for six months. Honorarium of £20.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £80 per [illegible]

MA [illegible] and Junior [illegible]

MET [illegible] etist. Honorarium 25 guineas per annum.

MICKLEOVER, DERBY COUNTY ASYLUM.—Senior Assistant Medical Officer. Salary £150, rising to £180 per annum, with apartments, [illegible] DISEASES— [illegible] ing to £150, [illegible] ent Medical [illegible] with board, [illegible] unmarried [illegible] ndance, and washing [illegible]

PORTSMOUTH, ROYAL HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, &c.

QUEEN'S JUBILEE HOSPITAL, Earl's Court, S.W.—House Surgeon for six months, renewable. Salary at rate of £52 per annum, with [illegible]

Ro [illegible]

Ro [illegible]

Ro [illegible]

ROYAL [illegible] IE CHEST, City road, E.C.—Hon [illegible] Salary at rate of £60 per ann [illegible] hing. Also Resident Medical Officer for six months. Salary at rate of £120 per annum, with *apartments board and washing*

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon. Also Assistant Physician.

ST. GEORGE'S HOSPITAL, S.W.—Assistant Physician.

ST. GEORGE'S UNION INFIRMARY AND WORKHOUSE, Fulham road, London, S.W.—Medical Superintendent and Medical Officer. Salary £400 per annum, rising to £500, and fees, with house, coals, light, &c.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—Junior Resident M [illegible] ary £40 p [illegible] ise Sur [illegible] g [illegible] Salary [illegible] Officer [illegible] GENERAL HOSPITAL.—House [illegible] m, with board, lodging, and washing [illegible]

THE Chief Inspector of Factories Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Jarrow, in the county of Durham.

Births, Marriages, and Deaths.

BIRTHS.

BATTERSBY [illegible] de House, Doncaster, the [illegible] ter [illegible] S.W., the wife of Mr [illegible] son [illegible] Sept. 22nd, the wife of [illegible]

MARRIAGES.

EDMONS [illegible] De [illegible] of [illegible] holomew's Church, [illegible] M.D., of Hanley, [illegible] swe, Esq., of Snare- [illegible]

DEATHS.

COUPER.—On Sept. 28th, at Avienmore, Alexandra road, South Shore, Blackpool, Marion, the beloved daughter of Dr. and Mrs. Sinclair Couper, aged 4 years.

HAMILTON.—On Sept. 25th, at Oakthorpe, Windermere, Archibald [illegible] Doveton Arthur [illegible] aged 37, District [illegible] arriving and much [illegible]

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CORONERS INQUESTS AND MEDICAL EVIDENCE

To the Editors of THE LANCET.

SIRS,—I shall be grateful for an opinion upon the various points set forth in the following letter. A labourer, aged 51 years, was assisting a fitter with a compressed air machine for punching holes. The machine was so arranged that the fitter held a handle on one side of the machine and the labourer supported the handle on the other side. During the working of punching holes the handles often kicked and the two men were liable to get knocked if they were not very careful. Such injuries were very common but no injury of any importance or even of such severity as to incapacitate a man from continuing to work had previously occurred. In this particular case the machine kicked and struck the labourer in the lower part of the abdomen. He was sent home in a cab and I saw him a few minutes after reaching his home. On examination I found he suffered from pain just above the right inguinal region. This man had suffered for several years from very severe attacks of bronchial asthma and had only recently recovered from an illness lasting over four months, during which time, from the dyspnœa and the œdema extending high up both thighs, he was unable to assume any other position than sitting upright in an armchair. When he returned to work—it was a matter of necessity—he was utterly unfit for even the lightest employment, but through the sympathy of his foreman he was allowed to resume. For some days he complained of pain over the part of the abdomen injured, but owing to the difficulty of properly examining him (the man could not lie down and his best position was sitting or standing) very little could be diagnosed of the effect of the injury in either of these positions. After a few days the pains began to shift and the main trouble seemed to be over the stomach, around the lower margin of the ribs of the left side, and the left shoulder. Poultices appeared to lend more relief than any other form of treatment. The bronchial asthma was so severe as to nearly mask all other symptoms and the patient occupied his time sitting on a stool in the backyard or on the edge of his bed, his bedroom being on the ground floor. His death was very sudden. I visited him about 11.30 A.M. and found him out in the yard, he appeared in much the same state, there was nothing to note of any serious change for the worse. In the afternoon he complained of a sudden severe pain exactly over the spot where he had been struck. He quickly became collapsed and died seven weeks after the accident, though he conversed with his relations until almost the last moment. The coroner arranged for a post mortem examination to be made the following evening at 8 o'clock. At the inquest the coroner ascertained these few facts: that the deceased had been my patient for several years, that he had suffered from bronchial asthma, that he was unable to lie down, and that I was called to him one evening when he was [illegible] accident caused the death.

I should like to make the following remarks:—1. The coroner arranged for the examination to take place at 8 P.M. and that Dr. X., a brother practitioner, should supervise it. Having been in practice 22 years and being a good deal older than Dr. X. I did not exactly grasp the meaning of this new experience. A pressing engagement prevented me attending the post mortem examination at 8 o'clock, so Dr. X. supervised his assistant. 2. I am aware of the fact that in large towns where there are specialists, Government medical inspectors, supervision at inquests does take place. 3. I am of opinion that in small and medium-sized towns where all the medical men are general practitioners in friendly opposition, for one practitioner to supervise another is likely to lead to friction. As the coroner in his summing up remarked, "Gentlemen, on the one hand you have the opinion of a skilled physician, on the other the doctor who attended the deceased." 4. The remedy lies in our own hands, the Medical Association to which all practitioners in the district are members, should the majority consider the question as I do—that in lieu of the word "supervise" "consultation" should be used.

If the coroner should still wish for supervision he could employ a practitioner from another district and so avoid unpleasant friction among the medical men *residing and practising in the town*.

I am, Sirs, yours faithfully,

Sept. 17th, 1904. CONSULTATION.

*** Under Section 21 of the Coroners Act, 1887, the coroner is [illegible] witness the medical man, if any, who [illegible] illness, or should there be none [illegible] titioner who is at the time in actual practice in or near the place where the death happened," and he "may direct such medical witness to make a post mortem examination of the body of the deceased." "Provided that where a person states upon oath before the coroner that in his belief the death

Communications, Letters, &c., have been received from—

A.—Messrs. Adlard and Son, Lond.; Messrs. C. Ash and Son, Lond.; Mr. G. de Andrade, Lourenço Marques; Association of Public Vaccinators of England and Wales, President and Council of the; Mr. T. Webster Atkins, Lond.; Mr. Salomon Aronow, Homburg.

B.—Dr. E. T. Bashford, Lond.; Dr. W. Langdon Brown, Lond.; Dr. James W. Barrett, Melbourne; Mr. O. Berthier, Paris; Brentford Union Infirmary, Isleworth, Medical Superintendent of; Mr. R. W. Barker, Lond.; Mr. H. A. Ballance, Norwich; Messrs. Bonthron and Co., Lond.; Dr. D. Bower, Bedford; Bristol General Hospital, Secretary of; Mr. J. W. Benson, Lond.; Mr. C. Birchall, Liverpool; Messrs. Boulton and Paul, Norwich.

C.—Dr. R. Crawfurd, Stuttgart; Mr. W. J. W. Childs, Lond.; Dr. J. A. Clarke, Dunoon; Messrs. Cassell and Co., Lond.; Croydon General Hospital, Secretary of; Cosmos Correspondence Co., Lond.; City Orthopædic Hospital, Lond., Hon. Secretary of; Mr. Edred M. Corner, Lond.; Charing Cross Hospital, Secretary of; Messrs. Samson Clark and Co., Lond.; Messrs. A. Constable and Co., Lond.; Dr. P. H. M. Cambridge, Freeburg, U.S.A.

D.—Messrs. Down Bros., Lond.; Mr. F. Dezairs, Fiorenzuola d'Arda; Dumfries, &c., Royal Infirmary, Treasurer of; Derby County Asylum, Mickleover, Clerk of; Digestible Tea Syndicate, Lond.; Mr. L Davies, Lond.; Major C. Donovan, I.M.S., Dunduan, Nungumbakam; Dr. H. Davy, Exeter.

E.—Mr. [illegible] burn; [illegible] yton, [illegible] and [illegible]

F.—Mr. G. M. Fox-Davies, Copenhagen; F. M. C.; Mr. H. Frowde, Lond.

G.—Dr. Annie C. Gowdey, Lond.; Mr. W. S. Galton, Lond.; Major-General C. M. Graham, Lond.; Dr. P. G. Griffith, Lond.

H.—Dr. G. P. Hawker, Guildford; Mr. Otto Holst, Eastbourne; Mr. T. C. Hodson, Lond.; Hanley Corporation, Town Clerk of; Professor Christopher Heath, Lond.; Mr. Alfred W. Hayles, Upper Pontnewydd.

I.—Messrs. Ingram and Royle, Lond.

J.—Mr. R. E. W. Jennings, Grays.

K.—Professor W. W. Keen, Philadelphia; King's College, Lond., Council and Staff of; Messrs. D. J. Keymer and Co., Lond.; Messrs. R. A. Knight and Co., Lond.

L.—Mr. H. K. Lewis, Lond.; Mr. T. D. Luke, Edinburgh.

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N.—National Hospital for the Paralysed and Epileptic, Lond., Dean of; North-East London Post-Graduate College, Dean of; National Provident Institution, Lond., Secretary of; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.; N. C.

O.—Odol Chemical Works, Lond.; Messrs. Oppenheimer, Son, and Co., Lond.; Oxychlorides, Ltd., Lond., Secretary of.

P.—Mr. Y. J. Pentland, Edinburgh; Dr. E. Pratt, Henfield; Mr. F. J. Pearson, Owston Ferry; Messrs. Parke, Davis, and Co., Lond.; Mr. R. Denison Pedley, Lond; Plumbers, Worshiptul Company of, Lond.; Messrs. Peacock and Hadley, Lond.; Mr. J. Taylor Park, Bolton.

Q.—Queen's Jubilee Hospital, Lond., Secretary of.

R.—Mr. Leofric Rees, Edale; Mr. Walter E. Roth, Brisbane; Royal Mail Steam Packet Co., Lond., Secretary of; Messrs. [illegible] rgh; [illegible] S.A.; [illegible] wer, [illegible] C. Richardson, Lond.; Mr. F. J. Rebman, Lond; Messrs. Reynolds and Branson, Leeds.

S.—Mr. J. H. Spreat, Widcombe; Dr. P. Blaikie Smith, Nairn; Mr. A. C. Story, Faversham; Salutaris Water Co., Lond.; Stourfield Park Sanatorium, Bournemouth, Secretary of; Samaritan Free Hospital for Women, Lond., Secretary of; Messrs. Charles W. Simpson and Co., Liverpool; Professor W. Stirling, Manchester; Messrs. W. B. Saunders and Co., Lond.; Mr. Henry Smith, Egremont; Messrs. G. Street and Co., Lond.; Messrs. Spelman, Norwich; Mr. B. F. Smallman, Lond.; Scholastic, Clerical, &c., Association, Lond.; Mr. E. Edward Sibley, King's Cliffe.

T.—Mr. C. E. Tangye, Knowle; Messrs. Teofani and Co., Lond.; Mr. John Teir, Salford; Miss Thornett, Lond.

U.—University College, Lond., Faculty of Medicine of, Principal of.

V.—Vernet-les-Bains, Director of Baths; Mr. J. W. Vickers, Lond.

W.—Mr. A. v. Wagner, Chemnitz; Mr. S. Wand, Leicester; Messrs. W. J. Wilcox and Co., Lond.; Wolverhampton General Hospital, Secretary of; West London Hospital [illegible] Dean [illegible] New [illegible] Loma[illegible] Mr. [illegible] Messrs [illegible] Messr [illegible] Lond.

Y.—Mr. T. E. Young, Lond.; Messrs. Henry Young and Sons, Liverpool.

Letters, each with enclosure, are also acknowledged from—

A.—Messrs. Armour and Co., Lond.; A. H. and F.; A. G.; A. L.; A. E. G.

B.—Mr. G. Billing, Blackpool; Mr. T. Buzzard, Lond.; Mr. H. J. F. Bourne, Eastbourne; Dr. J. L. Bogle, Stresa; Dr. J. H. Battersby, Doncaster; Mr. H. Brice, Exeter; Mr. R. P. Bolton, Blackpool; Bromley Electric Light, &c., Co., Manager of; Birkenhead and Wirral Children's Hospital, Secretary of; Messrs. J. H. Booty and Son, Lond.; Dr. J. J. Bennetts, Sturminster Newton.

C.—Mr. J. G. Chapman, Birkenhead; "Carolus," Brentford; Messrs. T. Christy and Co., Lond.; C. H. R.; Mr. V. Carney, Kilcock; Cumberland and Westmoreland Asylum, Carlisle, Secretary of; Mr. G. M. Cabrera, Lond.; Miss Coverdale, Lond.; Mr. J. J. Crowley, Donabate.

D.—Mr. A. Driver, Chelmsford; Mr. E. Dolman, Plymouth; Dr. Mina Dobbie, Lond.; Mr. P. J. De Souza, Karachi; Dr. J. H. Dauber, Lond.; Mr. R. C. Dun, Liverpool; Mr. J. E. Drake, Chew Magna.

E.—Messrs. Evans and Wormull, Lond.; E. R.; E. G.; E. J. W. C.; E. S.

F.—Mr. R. J. Farman, Sutton-in-Ashfield; Flower House, Catford, Medical Superintendent of; Miss Francis, Ipswich; F. T. E.; Messrs. Ferris and Co., Bristol; F. G.; Messrs. Fletcher, Fletcher, and Co., Lond.

G.—Messrs. Giles, Schacht, and Co., Clifton; G. F. S.; G. H. D.; Messrs W. and A. Gilbey, Lond.; G. B. C.

H.—Mr. J. D. Hadden, Lond.; Messrs. C. J. Howlett and Son, Lond.; High Shot House, Twickenham, Medical Superintendent of; Mrs. Hamilton, Windermere; Mr. T. J. Horder, Lond.; H. P. M.; H. H. W.; Mr. C. Holding, Ixworth; H. B.; "Harold Dene," Westgate-on-Sea.

J.—J. T. C. N.; J. R. W.

L.—Miss Z. Longstaff, Lond.; "Longcroft," Shoreham; Messrs. Le Lacheur and Son, Lond.

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O.—O. G.

P.—Mr. T. J. Pearse, Lond.; Preston Royal Infirmary, Secretary of; Dr. E. J. Parry, Pontycymmer; Messrs. Philip, Son, and Nephew, Liverpool.

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T.—Mr. T. W. Thomas, Caerphilly.

U.—University Tutorial College, Vice-President of.

V.—Vinolia Co., Lond.

W.—Mr. R. Walters, Abercynon; Mr. A. O. Way, Romsey; Messrs. H. Wilson and Son, Lond.; W. T. B.; Mr. E. H. Worth, Lond.; *Wilts County Mirror*, Salisbury, Manager of; W. T. S.; W. A. M.; W. K. D.

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Agent for the Advertisement Department in France—J. ASTIER, 31, Rue Bapts, Asnieres, Paris.

The Huxley Address

OF

THE FUNCTION OF THE CÆCUM AND APPENDIX

Delivered at Charing Cross Hospital Medical School on Oct 3rd, 1904,

By SIR WILLIAM MACEWEN, M D GLASG, F R S,

REGIUS PROFESSOR OF SURGERY UNIVERSITY OF GLASGOW

INFLUENCES AFFECTING HUXLEY'S CAREER

GENTLEMEN,—On one of those benches which you are now occupying there sat, about 62 years ago, a man destined to become one of the foremost workers and greatest scientific leaders of his time If any justification were needed for the free scholarships founded in the Charing Cross Medical School it would be found should the scholarships aid in producing once in a century a man of the calibre of Thomas Henry Huxley Most people are familiar with the immense anatomical and physiological work accomplished by Huxley with which his name will ever be connected It is, however, of interest to inquire into the influences to which he was subjected during the early period of his life which fitted him for his future career We cannot do more in passing than glance at two of these

What Huxley owed to the various teachers in Charing Cross Medical School may be difficult to gauge and hopeless to apportion, doubtless each had his subtle influence Some teachers supply material which enables students to pass examinations and nothing more Here and there one finds a teacher who not only imparts information but who can do much more for receptive students—he can teach them to observe and, better still he may induce them to think When we do happen to come in contact with one of these we should stand by silently and watch him work Such teachers are true fertilisers of youth Had it not been for William Hunter there never would have been a John Hunter The elder brother not only educated John Hunter in scientific anatomy and physiology but he put him on the rails of original research and the work accomplished by the younger brother in this direction is proof that he had profited to the utmost by his prior education There were two people who Huxley acknowledged aided in forming his early mind The one was Professor of Physiology in Charing Cross School of Medicine Mr Wharton Jones of whom Huxley says "I don't know that I have ever felt so much respect for anybody as a teacher before or since", the importance of that teaching may be gathered when it is remembered that Huxley made comparative anatomy and physiology his life study The other was a man with whom Huxley hardly ever came into personal contact and whose life work lay far removed from scientific pursuits, one who has been called many hard names and who will live long after the libellers have been forgotten—one who wrote his works in the silence and seclusion of the lonely countryside We may see in Huxley's whole life the immense influence exerted over him by this great teacher He not only led him to look into German literature and to reap the fruit of the extension of that study into German science, but Huxley's life work seems to have been framed upon Carlyle's principal motif Huxley acknowledges his great indebtedness to "Sartor Resartus" and perhaps I may be permitted also to acknowledge that influence The first time I read "Sartor Resartus" it was a sealed book to me, my mind being quite unprepared for it it fell flat Years after, having passed [illegible] difficulty in the meantime, I [illegible] upon "Sartor Resartus" and, [illegible] I re read it, day and night, pursuing its discourse with restless eagerness until it was consumed and digested Its true meaning and bearing on life was revealed, it proved a draught of deepest joy and refreshment to a thirsty soul It is evident that "Sartor Resartus" made a deep impression upon Huxley Look, for instance at what Carlyle says on the pursuit of truth "One circumstance I note," says he 'After all the nameless woe that inquiry which for me what it is not always, was genuine love of truth had wrought me, I nevertheless still loved truth and would hate no jot of my allegiance to her Truth—I cried—though the heavens crush me for following her, no falsehood! though a whole celestial lubberland were the price of apostacy" The same cry has been repeated through Huxley's life We recognise it as the guiding spirit of his work, that which made him hate shams and strike them hard when he found them In commenting upon the many hard names he had been called Huxley says "One thing people will not call me with justice and that is 'a liar!'" He regarded truth as the apple of his eye He would willingly own the monkey as an ancestor, should facts prove it to be so, and would shun anyone who used great gifts to obscure truth It was that ruthless endeavour to reach truth and to cling to it for its own sake that made Huxley what he was His creed may be summed up in his own words, "Sit down before fact as a little child, be prepared to give up every preconceived notion follow humbly wherever and to whatever abysses nature leads or you shall learn nothing"

No doubt most of you are familiar with that delightful life of Huxley written by his son and the many glimpses into his character which one gets there Allow me to give another Many years ago a paper was prepared by me on the Transplantation of Bone and a friend suggested that it should be sent to [illegible] person belonging [illegible] plying with the [illegible] not be received [illegible] Royal Society have the refusal of it So the paper was sent, addressed to "The Secretary" Shortly after I received a letter from Huxley, who was secretary at that time, inviting me to be present for the reading of the paper which he had taken the responsibility of placing directly before the society without requiring as usual that it should be first submitted to the council for consideration The recollection of that first meeting with Huxley has ever since filled me with warm admiration of his kindly personality I came before him an absolutely unknown person and a stranger yet he took me by the hand, seated himself beside me, and soon we were oblivious to all save the matter of our conversation He asked me many [illegible] bject of the paper and gave me [illegible] ng the persistence of vitality in [illegible] er forms of organisms and other [illegible] ier gave much useful advice on the best manner of presenting the paper to the society The summary read was successful in awaking the interest of the members in the subject treated and a discussion followed the reading in which Mr Busk, Mr Bowman Emeritus Professor Allen Thomson Professor Huxley, and others took part But I believe it was mainly the kindly interest evinced by Huxley toward the subject which brought about its favourable reception

RECENT VIEWS ON THE ALIMENTARY TRACT

Is this body of ours so very imperfect that we require to submit it to the numerous rectifications which are sometimes recommended to be carried out after it comes into the world? The Arabs, not content with the beautiful ovoid form of the cranium, apply boards and flatten the heads of their offspring Certain Africans and South Sea Islanders transfix their nasal cartilages and place rings and [illegible] Chinese produce a very high arc [illegible] by bringing the toes and heels [illegible] 'improvements' and call them distortions When a male child is born in this country some consider it necessary that he should be circumcised A few years later the tonsils are removed, this is followed by the removal of the pharyngeal tonsil, still later the appendix becomes an ever increasing terror [illegible] has been placed [illegible] expressed dis [illegible] are persuaded [illegible] that there is an intestinal whorl too much and that this extra whorl requires to be "short circuited" It is further alleged that the stomach is an organ which the human body would be well to be rid of, though it is the chief seat of digestion of albuminous substances yet that the small intestine should take its place One author goes on to say that many creatures that have found the opportunity of obtaining their nourishment in a highly digestible condition have lost more or less completely the digestive organs, that parasites such as the tapeworm have in

the human digestive tract, bathed in nutritive fluid which they absorb directly, they having no digestive tract. From the trend of this author's remarks one would gather that he believed that man has been evolved in the wrong direction, though he does not go the length of proposing that man should receive his nutriment through the medium of his morning tub. It would not be surprising if someone going on the same lines were to state that he had arrived at the conclusion that the olfactory and gustatory nerves were but remnants of a bygone age when our primitive ancestors had to sniff the air to guide them to their food and for its proper selection had to depend on their sense of taste; as these nerves were no longer of use for our protection and comfort, were in fact a source of considerable inconvenience, their devolution would add greatly to the happiness of mankind; that mastication was out of fashion, teeth a failure, deglutition a bore, especially as the tongue was now constantly occupied in a "higher sphere," and digestion a discomfort; that eating and drinking with all their attendant evils, being remnants of a pre-civilised age, ought to be abolished, and each human being, shortly after birth, should have an enterostomy performed—quite a simple matter, an incision, a loop of bowel, a few stitches—and ever after that be happy. A few pellets of concentrated essences delicately adjusted by chemical processes might easily be dropped into this minute aperture, where they would speedily be converted into pabulum sufficient to sustain man in all his wants without any waste products remaining. Instead of the nation being burdened by the maintenance of the largest fleet in the world held for the protection and transit of ships loaded with foodstuffs which pass into our markets day by day, some firms of chemists would simply enlarge their premises and send out food supplies in the shape of pellets which could be delivered by the local postman. What a social revolution this would accomplish! How much time and labour would be saved. The abolition of the epicure and the diner-out! Champagne and turtle soup a matter of history! No more teetotal societies or black-lists and the consequent empty gaols, to say nothing of the solution of the domestic servant problem! It is scarcely likely that in the city of London at least such a proposition would become popular.

Again, the large intestine is by some physiologists regarded as a useless inheritance, bequeathed to us by our animal ancestors, of little importance as far as digestion goes and only discharging a function similar to that of the urinary bladder. The urine, continually secreted by the kidneys, accumulates in the reservoir provided by the bladder. In a similar manner after digestion the remaining waste matter accumulates in the intestinal receptacle, the colon, where it remains for a period but where it may stagnate, the products of putrefaction being absorbed and thereby becoming harmful to the individual. It is boldly asserted that the large intestine and its appendix are at best superfluous, generally antagonistic to health and baneful to the life of man, and that their removal would be attended by happy results. Some who hesitate to go so far as to advocate the removal of the colon have no scruple in condemning the cæcal or vermiform appendix. All agree that this is a *rudimentary and useless* organ through the incompetency of which life is constantly threatened and many times lost. Some persons have been so much impressed by this idea that they are uneasy until the appendix has been removed and some surgeons say that while operating for other purposes, they never miss the opportunity of relieving their patients of a possible source of danger by removing the normal appendix from the abdomen.

With all such proposals before us, one is forced to ask, Is this human body of ours so badly constructed that it contains many useless parts and requires so much tinkering? Possibly I may be out of fashion with the times, as I cannot find such imperfections in the *normal* human body as are alleged. On the contary, the more one looks into the human body and sees it work the better one understands it and the more one is struck with the wondrous utility, beauty, and harmony of all its parts. There are many parts of the human body the structure of which is unknown and the function of which is hidden. Have we a right to conclude that every part of the human anatomy the structure and function of which we do not understand is useless? The theory of evolution does not lead us to such a conclusion. Evolution there certainly has been and it still goes on but it would be fallacious to conclude that every organ the use of which is not clear to us must be a remnant of a past existence and therefore of no further use. Man, like all other animals, has undergone, and is doubtless still undergoing, slight modification as the thousands of years pass, but when that fact is granted we have still to ask whether man has outlived the use of any particular part of his anatomy. Others argue on different lines, stating that they have removed the healthy appendix and that as the persons have thereafter maintained undisturbed health it was clear to them that the appendix could perform "no function useful to man." Is this argument not equally fallacious? One has been compelled to remove the spleen and certain portions of the brain, one of the lungs, and one of the kidneys, and the patients recovering were in after life able to go about their work without detriment apparent to the ordinary observer, but it would be ridiculous to say that therefore the spleen and those portions of the brain, kidneys, and lungs were useless in normal human beings and should be removed or that man would be as well without these organs. One would prefer normal man as he came into this world to the pared and mutilated animal which would be produced if the attempts at betterment which some proposed were carried into effect. With all his alleged imperfections normal man is a much more perfect animal than the physiologist or the surgeon can make him. Human effort towards the repair and perfecting of normal man has hitherto been poor compared with nature.

It is, however, seen that the appendix is often the seat of disease, sometimes arising with startling abruptness, sometimes approaching insidiously and usually selecting the youth of both sexes, striking them down with appalling suddenness. To combat the disease thousands of operations are required, many individual surgeons performing hundreds of operations for the relief of this affection which would in the majority of instances otherwise have ended fatally. All this removal of diseased appendices, however, does not bring us one step nearer the causation of the disease nor the prevention of the malady, nor does the solution of these seem probable as long as one regards the appendix as useless. If the appendix be really a useless organ and at the same time a menace to the life of its possessor, should it not be removed at an early period of existence? Many imbued with this idea beg to have their appendices taken away. In the midst of this serious indictment against the appendix, dare one say a word in its favour? The great majority of mankind seems to do very well with the appendix; it gives rise to no annoyance in them, for it is, after all, a small percentage of the community that becomes the victims of appendicitis. Is the appendix really a useless organ? In endeavouring to answer this question it is seen that the appendix is so closely connected with the cæcum that it is necessary in any such inquiry to consider the structure and function of the cæcum and appendix together. While physiologists have done much work on digestion in man they have confined their attention principally to the upper portion of the alimentary canal, seldom descending further than that part of the small intestine where the bile and the pancreatic juice are poured into it. The large intestine is treated by them as a whole, the cæcum is not differentiated, and the processus vermiformis is either not mentioned at all or dismissed in a few lines dealing with its histology. It is only recently that anatomical text-books have paid attention to the structure and position of the appendix, the attention of anatomists having been directed to it by the surgical work that was being done in that region. In the same way people learn geography by the wars that are being waged in various parts of the world. Speaking generally, the colon—including the cæcum—is regarded by physiologists mainly as a receptacle for the refuse of the foodstuff from which the nutriment has been removed. The absorption of the soluble constituents, especially of water, is completed in this tube and it is probable that cellulose may be digested by fermentive changes occurring therein. Is it not possible that in man the cæcum and appendix play an important part in the process of digestion? In considering this question let us first look briefly at the lessons which may be gained from a study of digestion in the lower animals.

Comparative anatomy shows us that in the lower forms of life, such as in fish, batrachians, and reptiles, the cæcal appendages do not exist, the small and large intestines forming a continuous tube. Higher in the scale of life, as in birds and mammals, one sees at the junction of the small with the large intestine one and sometimes two pouches in which the food undergoes a certain process of digestion before it is passed into the colon. There are, however, considerable differences in the cæca among the mammals and

birds dependent on the nature of the food which they consume and on whether there is special provision for its digestion In the carnivorous mammals as in dogs and cats the cæcum is rudimentary or absent and the colon is short and uncomplicated The gland secretion from the upper part of [illegible] lant and so strong as to produce [illegible] hich process is carried out in the [illegible] the latter of which also absorbs the principal nutritious elements It is quite different in the complicated digestive apparatus of the herbivora in whose immense cæca the digestive process goes on and in some of which it forms the most important part of the digestive apparatus In those of the herbivora whose food not only is poor in nutritious substances but is enclosed in resisting cellulose envelopes the digestive apparatus is complex and often specialised The ruminants have not only powerful masticatory apparatus and abundant saliva but they have several pouches and stomachs in which the food is prepared and they possess long intestinal tracts and well developed cæca On the other hand, in the monogastric herbivora, as [illegible] do not chew the cud and which [illegible] the stomach is small and the [illegible] cecal the cæcum having become The cæcum in these animals being much larger than the stomach and forming an immense pocket occupying the greater portion of the abdomen Besides having numerous folds of mucous membrane it is abundantly endowed with gland follicles and large lymphatics The cæcum is thus a compensatory organ to the stomach In those herbivora that feed principally on tender vegetables and fruits capable of being easily digested the cæcum is small In those that feed upon bulky vegetables difficult to digest and rich in cellulose besides having [illegible] in the upper part of the [illegible] cæca in which an impo[illegible] while in those herbivora whose stomach is small the principal part of their digestion occurs in the cæcum The cæcum of the solipedes takes the place of the ruminants stomach In birds the same facts are demonstrated The vegetable eaters among them have greatly developed cæca abundantly supplied with glands secreting a digestive fluid also with [illegible] n into [illegible] ds the [illegible] being [illegible] rds the [illegible] the [illegible] is [illegible] the alimentary canal and the cæca are absent The crop and gizzard fulfil the same end as the cæca It is seen in the herbivora that a large amount of undigested food is found in the cæcum while in the colon most of the undigested matter had dis[illegible] stion has occurred in the cæcum [illegible] cæcum acts as a reservoir for [illegible] odstuffs coming from the small [illegible] tion and temperature favouring [illegible] cellulose has passed through [illegible] n by the saliva gastric juice [illegible] comes digested in the cæcum [illegible] marsh gas and possibly into sugar, the latter of which is absorbed

To summarise one sees that the digestion in carnivorous birds and animals takes place principally in the stomach and small intestine, the cæca being rudimentary or absent while in the herbivora the cæcum is enormously developed and in the solipedes the cæcum is the chief digestive organ the stomach occupying a secondary place Man if not an omnivore [illegible] herbivorous one, the [illegible] to possess not only [illegible] cæcum just as he has As the vegetable food which he consumes is generally of the more tender and nutritive varieties the cæcum is only of moderate size

DATA OBTAINED FROM OBSERVATIONS ON MAN

During practice frequent opportunities present themselves by means of openings made for the relief of pathological *conditions or brought about by traumatism or disease* for observation on digestion as carried out in the various portions of the alimentary tract While such observations have from the very nature of things been fragmentary and incomplete, and in this respect not comparable to direct experiment practised on the lower animals and further having the disadvantage of be[illegible] surroundings still they posse[illegible] from having been made upon the patient of the escape of foodstuffs from the alimentary canal through fistulous openings varies according to their position relatively to their distance from the stomach The nearer the stomach the more serious is the result For our present purpose it is sufficient to look to the effects of the escape of chyme from such openings as may occur toward the distal end of the small intestine the cæcum and the colon When openings have formed toward the distal extremity of the ileum of sufficient magnitude to allow the chyme and intestinal secretions to escape freely the patient suffers from inanition A somewhat similar result is seen when the artificial opening has occurred in the cæcum of sufficient size and patency to allow of the free escape of the contents The strength of the patient becomes less and is difficult to maintain especially when ordinary food is administered

In marked contrast to this is the condition of the patient [illegible] lescending colon near [illegible] ight, on the contrary [illegible] strength are maintained and he is capable of carrying out his usual avocation with vigour These facts go to prove that the entire nutriment obtainable from food is not removed during its passage through the small intestine otherwise there would be no perceptible loss when the chyme is removed at the end of it, whereas it is only when the chyme is allowed to pass along the whole length of the large intestine as far as the sigmoid flexure that the patient derives the full good of the ingested matter It is further seen that if a large opening be made in the cæcum *not only permitting the contents to escape freely* but also interfering seriously with its secreting surface, troublesome diarrhœa is apt to occur accompanied by a watery secretion from the mucous membrane This diarrhœa which is likely to ensue constitutes one of the difficulties in dealing with such cases and arises not only from the interference with the cæcal function but also probably with the influence controlling the ileo cæcal valve If the cæcum be entirely removed the patient recovers and maintains fair health so long as special diet be taken, but he is subject to attacks of diarrhœa alternating with constipation on the ingestion of ordinary food In six cases of this kind operated on by me two had only a tendency to diarrhœa alternating with constipation and they complained of frequent indigestion of frequent c[illegible] which relie[illegible] these patients improved greatly in strength and weight, yet ultimately they appeared thin and impoverished the diarrhœa being still apt to occur In one patient whose cæcum ileo colic valve and a large portion of the ascending colon had to be removed the ultimate diarrhœa was an annoying [illegible] stated [illegible] indefinite [illegible] hilewise became weak and lost flesh and though living for many years after the operation never regained normal weight (It has been reported that ligation of the cæca in chickens produces diarrhœa with *loss of flesh which ultimately causes* death from inanition) Those cases illustrate the fact that the arrest of the function of the cæcum results in disturbed digestion manifested in diarrhœa and in lowering of the strength though these results may be modified by special diet

In observing *the cæcum through defects in the abdominal* wall it is seen that when in a physiological condition and undisturbed it undergoes considerable alterations in form sometimes being broader and sometimes elongated, and occasionally there is a churning movement At first such movements seem to be erratic but there are at least some of [illegible] the taking of food and [illegible] ine In some patients [illegible] stomach there was a [illegible] immediately [illegible] cæcal movement commencing from below upwards as if expulsive In one instance this seemed to correspond to a peristaltic action of the small intestine, but in others such movement in the small intestine could not be discovered and in them it followed the ingestion of food too quickly to permit of the peristalsis acting through the whole length of the small intestine It was therefore regarded as probably due to reflex action Once this movement was

excited in the cæcum it traversed the colon and in one instance, at least, it reached as far as the sigmoid flexure. Some of these cæcal movements originate in the appendix, the undulating movement running upward from the appendix and causing the contraction of the cæcum. There were other movements in the cæcum the point of origin of which was not ascertained. Observations on the interior of the cæcum seen through defects in its walls showed that there were differences in the amount and fluidity of the secretion exuding from its mucous surface. When irritated mechanically the flow of exudate was greater and more fluid. At a variable interval after a meal—one or two hours—peristaltic effects in the colon ensued resulting in the extrusion of its contents, and shortly after a clear thick fluid was poured from the secreting cæcal surface and in several instances was seen to exude in considerable quantity from the appendicular orifice. As far as could be ascertained there was no cause for this flow other than a reflex action, possibly stimulated by the presence of food and the exudation from the upper part of the small intestine.

In a case where the anterior wall of the cæcum had been removed (by an explosion), the ileocæcal valve and the appendicular orifice being exposed, after recovery from the shock several observations were made. First it was seen that there was a considerable flow of glairy mucus from the appendix and cæcal surface which did not constantly exude or at least did so to a greater extent shortly after food was introduced into the stomach and to a marked extent just before food began to pass through the ileo-cæcal valve. On one occasion quite a stream of fluid poured from the appendix just before the chyme began to pass through the ileo-cæcal valve. When chyme passed through this valve it did so in small quantities at a time and there were occasional pauses in which the ileo-cæcal valve seemed to close—probably by a reflex action. This fluid from the cæcum and the appendix was invariably alkaline. This patient, who was very observant, took quite a philosophic interest in his condition and was rather proud that his misfortune could be made of service. It was seen that his will power had no effect upon either the secretion or on the control of the ileocæcal valve; but one day when he was much disturbed by the reception of "bad news" which could not be kept from him, and after which he said he had indigestion or was "bilious," the secretion in the cæcum was at first very watery and then the surface became drier than at any previous time and apparently the contents of the small intestine were more quickly evacuated and overflowing gave rise to smarting and irritation on the sides of the wound. The chyme was acid, the cæcal secretion being scanty was not sufficient to neutralise it. Usually the flow from the ileo-cæcal valve was slow, the material passing into the cæcum in small quantities which slide over the orifice of the appendix and get smeared by the exudation therefrom, as well as mixed with the exudation from the general cæcal cavity.

It seems as though there were a control over the ileo-cæcal valve regulating the amount of material which passes from the small intestine into the cæcum. If the valve by any means be rendered patent the contents of the small intestine flow quickly into the cæcum and a troublesome escape of semi-digested material ensues—material which has missed the cæcal digestion. One of the troubles of operation in this region consists in the arrest of the control of the ileo-cæcal valve and the flow of the fluid contents from the small intestine into the cæcum at a rate greater than the cæcum and appendix can deal with. Is this regulation of the flow into the cæcum due to reflex action induced by the impression on the nerves of the mucous membrane of the cæcum and appendix brought about by the quantity and quality of the contents of the small intestine which are received into the cæcum? Such is a probable solution. Attempts were made to stimulate artificially the exudation from the cæcum and appendix. The passage of the finger lightly over the cæcal surface from the ileo-cæcal valve downwards toward the base of the cæcum did not succeed in increasing the exudation. A camel's hair brush moistened in the chyme issuing from the ileo-colic valve and drawn several times downwards over the mouth of the appendix was followed on several occasions by an increased exudation, while oftener it had no such result. The fold of mucous membrane about the orifice of the appendix has been seen to close and to cover the orifice and in the same patient has been seen to recede and to expose the opening. Artificial means were not successful in bringing the folds of mucous membrane over the aperture by inducing reflex action.

You are all aware that by a beautiful experiment performed on the upper part of the digestive tract of dogs Pawlow has recently shown that there was what he named an acid reflex which controlled the pyloric extremity of the stomach and prevented the acid contents of the stomach from issuing in too great quantity at a given time, whereas with alkaline contents the reflex of the pyloric valve did not exist. It appears to me that at the ileo-cæcal valve there is a controlling reflex agency regulating the flow of partially digested food into the cæcum. It regulates the flow of material at a rate which enables the cæcum and its juices to deal with it. When this agency is interfered with cæcal indigestion occurs which generally ends in diarrhœa of partially digested matter but which occasionally leads to masses of matter gathering in the cæcum and causing constipation with subsequent fermentative action of a kind which is apt to result in irritation of the mucous membrane and appendix.

THE NERVOUS MECHANISM OF THE APPENDIX.

The appendix is regarded as a mere diverticulum of the cæcum and yet its vascular and nervous supply pertains more to that of the small intestine than that of the colon. The appendix is supplied by the terminal branches of the same group of nerves as supply the small intestine; the superior mesenteric plexus of the sympathetic reflex action may be easily set agoing in the appendix by stimuli from the small intestine and each part may react on the other. When it is recollected that the circular muscles of the cæcum are continuous with those of the appendix and that the longitudinal cæcal bands end themselves on the appendix it will be understood how easily the nervous apparatus of the appendix may initiate the larger movements of the cæcum by first inducing movements in the appendix and how inhibition of these movements may cause cæcal disturbance. The same agency by control of the vascular supply will regulate the exudation from the appendix and that in accordance with the impulse received from the small intestine. It is known that the mind has an influence on the small intestine through the vagi, sometimes exciting peristalsis and sometimes arresting it. The appendix is subject to the same mental effects. An instance of the result of mental disturbance on the cæcal secretions having been already quoted one can see that a concentrated brain effort or profound mental distress has the powe[illegible] e appendix and cæcum and their [illegible] through the mind are well know[illegible] of the salivary glands. In two cases which were under my notice, in both of which the duct had formed a communication with the skin on the cheek, while the natural opening into the mouth had closed, we could produce an astonishingly free flow of saliva by mere suggestion of foods, especially of acid fruits. One of the patients had to beg of his friends not to introduce food topics into their conversation in order that he might be relieved from mopping up the flow. While his mind was fully occupied, as when he felt cornered in chess, there was cessation of the salivary flow.

In the foregoing we have seen that there is a nervous mechanism regulating the movements of the appendix and cæcum and also controlling the ileo-cæcal valve. We have also seen that the exudation of the appendix and cæcum is augmented and diminished in certain circumstances. Let us look now to the character and power of this exudation emanating from the appendix and cæcum.

THE SECRETING SURFACE OF THE CÆCUM AND APPENDIX.

In the first part of the large intestine, and especially in the cæcum and appendix, the lymphatic follicles and the glands of Lieberkühn are very numerous and well developed, the latter being larger, deeper, and broader than the corresponding cells in the small intestine and the goblet cells which they contain are larger and more abundant. This all histologists admit. So closely are those glands packed together in the cæcum that the united surface presented by them is immensely larger than the ridges between the glands which is all that is left at this place for absorption. So that the histological structure would point to the cæcum and appendix being made for digestive purposes rather than for absorption. The succus entericus which is exuded by these cells of Lieberkühn has hitherto received scant attention by physiologists and it has been stated that even in the small intestine it is of little moment in digestion. But in the small intestine the succus entericus is of great assistance in digestion, possessing the capability of increasing the activity of the pancreatic ferments and "more especially the proteolytic," the latter to a marked degree. The succus

enterious appears to Pawlow as a ferment of other ferments which he names enterokinase. So powerful is this kinase that while pancreatic juice alone took six hours to dissolve fibrin in a thermostat and had not even attacked white of egg after ten hours, the addition of some succus enterious to the pancreatic juice dissolved the fibrin in from three to ten minutes and the coagulated white of egg in from three to six minutes.

Now, if we remember that the glands of Lieberkühn are far more numerous and better developed in the upper part of the colon, the cæcum, and appendix than in the small intestine it will be apparent what a powerful adjuvant to the completion of digestion is to be found in the cæcal succus enterious which is poured out so abundantly from those parts upon the semi-digested matter received from the small intestine. Taking the appendix apart, though there are individual differences, one sees in most appendices that the surface is covered with glands of Lieberkühn in an active state of secretion during health (Fig. 1). If one

FIG. 1.

Glands of Lieberkühn and lymphatic follicles taken from the appendix (longitudinal section).

takes the appendix at an average of three and a half inches and lines that space with glands of Lieberkühn encircling the interior it is seen that a considerable amount of succus enterious may be exuded from that surface alone, more especially as it is abundantly supplied with blood. Therefore the secretion of the appendix viewed alone in this sense would be a valuable aid to digestion.

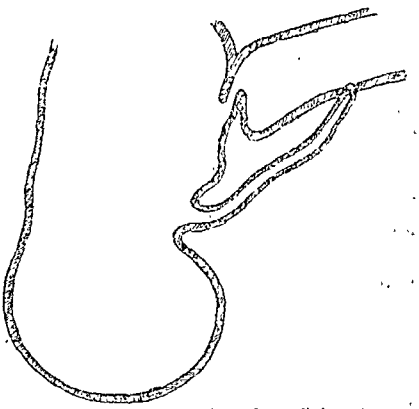
THE ACTIONS OF MICRO-ORGANISMS ON CÆCAL DIGESTION.

There is, however, another agent at work in the final disintegration of pabulum poured into the cæcum and that is the micro-organisms. They find in the cæcum and appendix abundance of alkaline medium in which they can grow and pabulum in the chyme for their development. They undoubtedly perform a part in disintegrating compounds which have resisted the action of the gastric and intestinal exudations. These organisms are found in all the recesses of the cæcum and colon and are constantly found in the cavity of the appendix, the exudation from which aids in stimulating and at the same time in controlling the action of the organisms and in preventing them from acting injuriously upon their host. The leucocytes in the solitary lymphatic follicles and t[illegible]
Bizzozero has sh[illegible]
rabbits contain [illegible]
organisms and [illegible]
organisms in a single field of the deeper layers of the vermiform appendix. It looks as if the cells and nuclein of the solitary follicles in the appendix have a controlling action on the organisms, and one of the functions of the appendix may [illegible] these organisms in a fit state to p[illegible] pabulum poured into the cæcu[illegible] this function the germs may be capable of damaging the coats of the cæcum and appendix which have been thereby lowered in vitality. When a purgative action has produced its effect and cleared out most of the germs from the cæcum and colon, those in the appendix will still maintain a fresh culture for renewed action. The chyme from the ileo cæcal valve is directed towards the orifice of the appendix and receives there its portion of succus enterious and germs fitting it for the completion of digestion.

SOME ANATOMICAL RELATIONS OF THE APPENDIX AND ILEO-COLIC VALVE.

When one looks at the disposition and arrangement of the various parts in the interior of the cæcum one sees that the ileo-cæcal valve, besides performing its other functions, is so founded that it sheds the chyle over the orifice of the appendix in its descent into the cæcum. (See schematised drawing of interior of cæcum and appendix.) The appendix, while in itself having the muscular mechanism and nervous apparatus necessary for emptying its contents in any position it may normally be placed in, is, in the majority of instances, so situated that the action of gravity favours the escape of the contents into the cæcum. The action of gravity favours the retention of the chyme in the cæcum until the cæcal digestion is completed, when muscular movements are originated for its expulsion. (Fig. 2.)

FIG. 2.



Scheme of cæcum, ileo-cæcal valve, and appendix in section.

CAUSATION OF APPENDICITIS.

In the foregoing it has been shown that the cæcum and *appendix perform an important* part in the final stages of digestion. If this be so one would expect *a priori* that serious interference with the function of those parts would give rise to disease. This is exactly what occurs. Though the causes of appendicitis are varied the majority are intimately associated with the digestive process and the factors controlling it. Thus, Deaver, who has perhaps performed more operations for appendicitis than anyone, says that the disturbances of digestion have been so pre-eminent in the etiology of appendicitis "that it is unhesitatingly asserted that appropriate inquiry will elicit a history of such disturbances in almost all cases." "Indigestion" is a very *vague and loosely employed* term to indicate discomforts of many kinds occurring in the alimentary tract. The differentiation of cæcal indigestion from other forms requires further study before the symptoms pertaining thereto are accurately defined. This presents certain difficulties—first, because cæcal *digestive incompetency* must have an effect upon the upper part of the intestinal canal, while indigestion arising in the small intestine will likewise act upon the cæcum; and secondly, because the irritation and inflammatory changes in the appendix produce through the superior [illegible] pains in the abdomen generally but [illegible] the umbilicus. *From these two* [illegible] in the early stages in properly localising the lesion and often the patient is believed to be

suffering from a form of indigestion attributable to the stomach or upper parts of the small intestine when in reality it arises from the cæcum itself. If cæcal disturbance of function continues both cæcum and appendix suffer. There will be want of proper exudation of succus entericus in quantity and in quality and lowering of the activity of the solitary lymphatic glands which will no longer control the germs which swarm in that cavity. The bacillus coli communis, which is the surgeon's terror, serves in its proper place a beneficent purpose in effecting the disintegration of some of the undigested matter but when uncontrolled by the healthy organs and their exudations is apt to cause ravages in the tissues and to produce toxins which are lethal. If from inhibition of the appendicular and cæcal movements or the want of exudation of the succus entericus or if the cæcum receives material which the succus entericus cannot digest a stasis occurs in the contents of the cæcum and the constipation which is so often a feature of the appendicitis ensues. At a later stage fermentative disintegration of the fæcal contents with absorption of toxins and damage to the wall of the parts are apt to ensue. These are followed by diarrhœa which is sometimes curative.

Doubtless the appendix and cæcum are affected together but just as pyogenic organisms affecting the throat spread by continuity of structure to the middle ear and mastoid cells and produce serious damage there long after the throat has healed, so the appendicular inflammation once started may continue to produce serious effects within the appendix after the cæcum has recovered from the primary effects. As to prevention of appendicitis there are some lessons to be derived from the foregoing. Primitive man had to search for his food and sometimes he had a hard physical fight to get it. When he found it he had been looking forward to it, was fit for it, and enjoyed it; consequently he had an abundant flow of all the digestive juices which were ready to receive the food and to give it a warm welcome. Present-day man is said to be in an evolutionary stage. With his indoor occupations and his ever-engrossing mental pursuits he forgets that he has to live and that in order to do so he has to eat and to digest and that his duty to himself and to the community is to do both well in order that he may continue in health. But from the way prevalent in many places he seems to act as if food should be thrown into the stomach as a sandwich into a pocket and the lid closed. Then he wonders that he has indigestion and appendicitis. Though in a sense digestion is independent of the direct control of the brain, yet powerful mental impressions exert an influence over the glands concerned in digestion—from the salivary down to the glands of Lieberkühn in the cæcum and appendix. The mental influence is such that when the mind is engrossed in other affairs than the taking of food those gland secretions are apt to be scanty and indigestion is apt to follow. If a person is mentally engrossed he ought to refrain from eating or to eat very sparingly. The standing lunch, eaten against time while the mind is fully occupied with business or professional examinations, the food instead of being chewed and mixed with saliva being simply washed down as a bolus with some fluid, is one of the best ways of not only producing indigestion but of ultimately causing cæcal and appendicular mischief. Man has neither got a crop like a bird nor a cæcum like a horse and therefore he has no provision for bolted food. One has heard of children being forced to take foods which they dislike because "it was good for them." The digestive juices will not flow in such circumstances. The brain of children is often so burdened with "tasks" committed to memory and engrossed with educational enigmas that there is no time for digestion. Mastication is not taught in schools, digestion has no place in national education, and there are no certificates given for sound digestion; but we appoint instead Royal Commissions to inquire into the causes of the physical deterioration of the race. Although the cæcum aids in digestion it does so by receiving partially digested food which contains the proper amount of secretions from other glands. It does compensate somewhat for their defects but cannot do so entirely. Therefore, it is a matter of great moment to commence the digestive process well. A free mind, with the prospect of enjoyment of food, thorough mastication until the saliva is efficiently mixed with the food, and then the process of gastric digestion will have a good beginning and the food thus prepared will be received in due course with abundant digestive juices in the other parts of the canal. At a consultation on one occasion the lady of the house (French by origin), who was not a patient, being in perfect health, twitted the local Scotch medical man with the rainy weather they kept in Scotland. He replied: "But, my lady, it seems to suit you as you are always in good health." "Yes," she said, "thanks to you, doctor, you always keep me in good health." The medical man laughed and explained that the lady always asked for advice but never took the medicine. The lady said that at least she always had the prescription made up, that it was the same wherever she went—London, Paris, or elsewhere—she consulted the best authorities and had a general chat with them about her condition and how best to maintain health and when they were good enough to give her a prescription she had it made up and dated and placed both prescription and drug in a cabinet made for the purpose. But, she added, "Indeed, I have never been ill. I believe the greater number of maladies arise from indigestion and that indigestion occurs mainly from too fast eating, whereas I eat slowly and many times I am ashamed as I am the last to put down my fork." There was a method in that lady's madness.

For many years I have believed that the cæcum and appendix are of value in digestion. The facts pointing in that direction have accumulated slowly and are not all garnered. Many require still to be investigated. One would have preferred to wait until they were gone over again, re-tested, and either verified or dropped out. But "art is so long" that I have ventured to present you with an unfinished picture which I hope some of you will be able to correct and to finish. What has been said is merely a contribution to the subject. In dealing with it in the future remember what Huxley says: Let us sit down before fact as a little child, be prepared to give up every preconceived notion and to follow humbly wherever nature may lead.

References.—Lectures of Professor Pawlow; translated by W. H. Thompson. (Charles Griffin and Co. London. 1902.) R. M. Smith: The Physiology of the Domestic Animals. (Philadelphia. 1889.)

An Address

ON

THE FUTURE RELATION OF KING'S COLLEGE TO ITS MEDICAL SCHOOL AND HOSPITAL.

Delivered at King's College at the Opening of the Medical Session on Oct. 4th, 1904,

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GENTLEMEN,—Before proceeding to address you on the subject of the future relation of King's College to its medical school and hospital I should like to say a few words upon the more general topic of the medical life and practice. And first let me congratulate the students who have been winners in the competition for the highest distinctions awarded in the medical department, and have received to-day the welcome recognition of their industry and ability. There is no need for me to enlarge upon this. The legitimate satisfaction at their success which they must feel is far and away more grateful to them than would be any words of mine. But I should like to remind those of my hearers who have industriously competed without in the end finding a place in the list of the more fortunate recipients that they cannot be described as "losers." They are simply "non-winners," and indeed, so far from having lost anything, it is certain that they have gained very much, for the time expended in working cannot but be attended with infinite advantage to themselves. It has been wisely said that "the reward is in the race we run, not in the prize." Nothing can deprive them of the precious service to their own mental development rendered by their hours of industrious occupation and the last thing they would desire or need from us would be any expression of condolence.

It would be a truism to say that the medical students of

this college are on the threshold of an honorable profession. Speaking as one who has been a member of it for very many years I should like to say for their encouragement that I believe they have chosen well. They will have the opportunity of living the fullest, and it will be their own fault if it is not the most useful, of lives. What better has existence to offer than this? I took my place as a first year's student in this college on the occasion of an introductory address by the late Dr. Todd, and of all the many sentences which fell from his silver tongue there is but one which I now remember, and that was a quotation, "To scorn delights and live laborious days"; and the words were applied, of course, to a medical career. The aptness of the latter part of the quotation cannot be denied. There is probably no more laborious life than that of a medical man and doubtless in the sense in which the words were employed by the poet (as will be acknowledged by those who remember the context) the former half is also true. But I am ready to assert with confidence that in no walk of life can the highest forms of delight, those which belong to the acquisition of knowledge and those which never fail to attend the faithful performance of duty, be looked for and found more certainly than in that upon which many of those before me are now entering. Did time permit I would gladly pursue this general topic—one upon which the experience of a long and active professional life probably gives me some authority to dwell—but I will content myself with saying a few words upon a practical point which may perhaps prove useful to some of those whom I am addressing.

I would earnestly counsel all those who have the opportunity—and there must be very few who have not—to aim at the highest—not to be satisfied, I mean, with that qualification for practice which is most easily obtained. Addressing as I am an assembly of medical students, the majority of whom are probably intending to enter family practice, I would point out to them that in these days graduation at a university is in the air. The times have passed when it was only necessary in our profession for the consulting physician to obtain a degree. In such greater numbers every day are family practitioners adopting this course that one need not be possessed of any gift of prophecy to say that in a few years those who are without a good medical degree will lag behind in the race for success and still more so for distinction. As is well known, Cambridge and Oxford are attracting large and increasing numbers. The more recently founded and important universities in our northern counties are providing admirable facilities for students coming from the provinces. London, however, with its unrivalled resources for clinical teaching and experience, must in the future become more and more the most esteemed centre of all for the acquisition of medical knowledge. In its lately developed form the University of London is, if I am not mistaken, certainly coming to occupy the highest place in the education of the medical profession. The well-recognised esteem in which its medical degrees have always been held has suffered no diminution since the change in its constitution, whilst the direct representation on its Senate of all the most important colleges and public bodies in London has vastly increased and widely extended its influence upon education. I should certainly advise every student I am addressing to aim at obtaining a degree in the Faculty of Medicine of the University of London.

As I said before, graduation is in the air. The time is rapidly coming when members of all professions will naturally be expected to hold a university degree. It is not so many years since it was a rare exception for a solicitor to have graduated at a university and as for the engineer or the architect they were practically never seen in the ranks of university graduates. All this, as we well know, is changing daily. Even in the military profession graduation is asserting its influence and the Army Council is arranging with the universities to carry on military education during the undergraduate period, granting a commission upon examination to selected candidates when the degree is taken, and antedating it by a twelve-month to the recipient of honours. I say that you cannot afford to lose the opportunity which you now enjoy of taking a London degree. I daresay it will appear to many of you impossible that you can ever require it. That is what you cannot possibly foresee. I have the best of reasons for knowing that the possession of the London degree may make a vital difference in the whole career of him who holds it. Nor is the advantage of it at all confined to consultants. I was consulting a few weeks ago with a very able practitioner of medicine in one of the London suburbs [illegible] London degree I asked [illegible] any difference to him. [illegible] had made all the difference in the world to him. He was junior partner in a firm of three of which the two others were also graduates of London and he would not have been permitted to join them but for his [illegible] also that in his [illegible] to appreciate th[illegible] wanting signs th[illegible] itself more and more of the services of high-class members of our profession in public duties, especially perhaps in the investigation of the causes of disease in various parts of our worldwide empire and in the organisation of measures for their prevention and treatment. For such appointments the mark of higher education which is furnished by the possession of a London degree cannot fail to be of great value. I would remind those now entering that the curriculum is of the same length, five years, both for a London degree and the Conjoint diploma. Let them try, if they will, for both. They will have to work extremely hard there is no doubt. So much the better. I feel inclined to repeat what President Roosevelt says in one of his addresses, "Your work is hard. Do you suppose I mention that because I pity you? No, not a bit. I don't pity any man who does hard work worth doing."

Are the London degrees obtained with any more ease than was formerly the case? I do not think so. Perhaps the larger choice of subjects in the matriculation examination may facilitate matters a little. A little grace, too, is given in another direction. In the general preliminary scientific examination a student may be examined in each of the three subjects separately. Students who have failed in one or more subjects of the examination may offer themselves for re-examination in these subjects, either separately or together, at any subsequent examination. And in the general intermediate examination in medicine students who have failed in one subject only may offer themselves for re-examination in this subject if permitted to do so by the examiners. Personally I should be inclined to extend such facilities and to favour the candidate being allowed to take his subjects in a somewhat piece-meal fashion. It is amusing to see a juggler keep half a dozen balls in the air at the same time but there is no particular use in the achievement. The necessity of passing in several subjects on one and the same occasion disposes, I think, to cramming and in my judgment should be discountenanced. It may probably be taken that the London degrees are at least as valuable as they ever were and no less difficult to obtain. Can it be doubted that a student should strain every nerve to obtain such a distinction? It has been said that a severe examination always excludes fools and sometimes excludes persons of genius. I would commend the consideration of the latter alternative to those who have the misfortune to fail.

Let me turn now to the topic upon which I have promised to say a few words. It will be readily understood that the approaching removal of our hospital to Camberwell has necessitated the most careful and anxious consideration of the relations which should subsist in the future between the College and its Medical School. The disadvantage which has always to some extent been felt in the past from the circumstance that the school and the hospital were not under the same roof (as is almost invariably the case with the medical schools generally) would naturally be much intensified by the greatly increased distance between them unless measures could be taken to obviate the difficulty. It was at once evident that with a distance of nearly four miles between the College and the new hospital continuance of the Medical School on existing lines was not practicable. In certain respects, too, it must be remembered, the step we are about to take is unexampled in the medical history of the metropolis. It is true that hospitals without medical schools have before now been transferred successfully to new sites. And we have also the example (I think a solitary one) of St. Thomas's Hospital (possessing, as we all know, a very important medical school), which was removed from the Borough to its present position in Lambeth after a temporary sojourn in the Surrey Gardens at Walworth. In that instance the school along with the hospital was successfully removed, and possibly there are

those who would say that there is no reason why we should not simply imitate the example which has thus been set. I think I can show you why this is out of the question. In the first place, since the old days when St. Thomas's Hospital was in the Borough, 40 or more years ago, a great change has come over the academical arrangements for the education of the medical student. At that time (and I am speaking of things within my personal knowledge) the old idea of "walking the hospitals" as representing the first step to be taken in medical education had not altogether died out and the notion that the student ought to prepare himself by some years of scientific study to profit by the opportunities of clinical experience at the hospital had not advanced into practical working. Accordingly the student of medicine entered the wards of the hospital on the day that he joined a medical school. In some cases this would be only a month or two after he had ceased to be a schoolboy. In many instances he would have passed some years as an apprentice dispensing his master's prescriptions. The expression "preliminary and intermediate studies" was then unknown. In these days, as is well known to the teachers though the fact may not be widely recognised by the public, the student does not make, or ought not to make, his appearance in the wards of the hospital until he has been for some two years or more studying and has passed examinations in a number of scientific subjects. Sometimes, it is true, he may put in a little work as an out-patient dresser or clerk. But this, I understand, is rapidly becoming a thing of the past and his appearance in the hospital itself in the earlier half of his education is now in some institutions forbidden and in all discouraged. For that reason alone the removal of our medical school to Camberwell, so far as the preliminary and intermediate studies are concerned, with the necessary vast expenditure which would have to be incurred in connexion with lecture rooms, apparatus, laboratories, &c., would clearly be motiveless. It will not bear a moment's contemplation.

But there is also another and a yet more convincing reason. King's College, on account of its science faculty and because of its recognition by the University of London as a complete collegiate institution, must in any event still retain the teaching of these purely scientific subjects, and it is in the college itself and not in the hospital that they must be taught. It must be remembered that this is not simply a question of a hospital linked on to which is a school of such scientific subjects (and those only) as concern the medical student. King's College is an institution which may be described as of university character. It possesses faculties of theology, arts, science, engineering and applied sciences, and medicine, besides having a women's department and a boys' school. A very large and important professorial staff has to be maintained for the service of the various faculties, and the medical student who enters here has the great advantage of sitting under professors whose business in life it is to teach the particular subjects in which their eminence is acknowledged. The only other institution in the metropolis with which it is comparable is University College. These two colleges are described in the University of London Statutes as "Schools of the University in all the faculties in which they respectively afford instruction." The medical schools of the metropolis generally are designated "Schools in the Faculty of Medicine." There is no necessary obligation for the schools in the Faculty of Medicine to concern themselves with the teaching of the preliminary and intermediate studies. It is notorious that the burden of provision for the teaching of such subjects has often been, and is now in many instances, a grievous one. There has never been any financial advantage in it. On the contrary, it signifies a constant outlay upon the various requirements for the exposition of the subjects and this, with the progress of science, is becoming, and cannot fail still to become, a more and more serious demand. It means the absorption of space which would be of the greatest possible value in supplying the needs for properly teaching the essentially hospital studies. It means that very often a man whose abilities lie in the direction of medicine or surgery rather than in that of pure science and who is conscientious in his work, spends a large amount of time in cultivating his knowledge of and teaching a subject the pursuit of which, whilst it is of no use whatever to him, probably displaces research in another direction which might be of great service to the science or art of his profession. How much better it would be if this work were undertaken by those who have made the study of these sciences their life work and the teaching of them their profession.

It is easy to understand how the medical schools have almost insensibly piled up on their shoulders the burden under which many now groan. The task of supplying such requirements in the old days was not a very severe one. But year by year the difficulty has increased until it has become well-nigh insupportable. The process, no doubt, has been a very gradual one, and in the earlier days indeed the idea of obtaining elsewhere than in the hospital the necessary teaching of more or less preliminary subjects did not enter into consideration. A young man entered at one of the hospitals and found there, as he expected, all that he needed for each step in the process necessary for acquiring a degree or diploma. The idea of going outside the hospital for any part of his education was practically never entertained. All that is now changed. The student of medicine may obtain, and as a matter of fact frequently does obtain, the teaching of such subjects as chemistry, physics, and biology where he likes so long only as he conforms to the regulations of the examining body by which his knowledge is to be tested. It is also notorious that the large majority of the students who pass their examinations in the early studies at Cambridge or Oxford up to and including anatomy and physiology come to London for their hospital studies and enter at any hospital they may choose to select. The idea that the student should necessarily carry out his "hospital studies" at Oxford or Cambridge is never contemplated. In the case of the many London students who do not go to the older universities and whose aim it is to obtain a degree at the University of London or the diploma of the Conjoint Board, it is evident that King's College has peculiar advantages to offer as a school for the preliminary and intermediate studies. Owing to its constitution as a complete collegiate institution it is necessarily equipped in its science faculty with all the requisites for education in the purely scientific subjects—those studies which have to be completed before the student need determine at which hospital he will enter to carry out his advanced or hospital studies. How to extend these advantages and to turn them to the best account in the new departure in which we are engaged has occupied the very earnest consideration of the council, in which it has received most valuable help from the professorial staff of the medical department.

It has appeared to us probable that some of the medical schools of the metropolis who wish to rid themselves of the incubus of providing education in the preliminary and intermediate studies (which, as I have said, is really no necessary part of the work of a medical school) might be glad to come to some mutual arrangement by which King's College would carry out this portion of the curriculum in its science faculty, leaving the student free at its close to complete his education by pursuing the advanced studies elsewhere. So long as King's College continued, as in the past, to receive practically only those students who intended to carry out their whole professional education under its wing it would, I need scarcely say, have been useless to expect that other schools would send their students to it for the early studies. In our new departure it is recognised that King's College, by the peculiarity of its constitution, has probably an increasingly important part to play in the education of the student in the early studies provided that the interests of the other medical schools are properly safeguarded. Surely this should not be beyond the reach of arrangement. I believe I am correct in stating that University College is proceeding on similar lines. By a curious coincidence the first two colleges of the University of London—University and King's—find themselves simultaneously, the former by its forthcoming incorporation with the University and the latter by the impending removal of its hospital to Camberwell, in an unusually favourable position for completely separating the department for the later medical studies from that which is concerned only with the preliminary and intermediate subjects. In each case the arrangements for teaching these latter will be so ordered that they will be able to be made use of by as many of the other schools as may desire to do so consistent with the amount of accommodation they are in a position to afford. The Institute of Medical Sciences projected by the Senate of the University will provide, in process of time and when the very large amount of funds requisite for the purpose are obtained, a third centre of the kind.

It has recently been suggested by a very eminent authority that a centre for the preliminary and intermediate studies

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But there is also another and a yet more convincing reason. King's College, on account of its science faculty and because of its recognition by the University of London as a complete collegiate institution, must in any event still retain the teaching of these purely scientific subjects, and it is in the college itself and not in the hospital that they must be taught. It must be remembered that this is not simply a question of a hospital linked on to which is a school of such scientific subjects (and those only) as concern the medical student. King's College is an institution which may be described as of university character. It possesses faculties of theology, arts, science, engineering and applied sciences, and medicine, besides having a women's department and a boys' school. A very large and important professorial staff has to be maintained for the service of the various faculties, and the medical student who enters here has the great advantage of sitting under professors whose business in life it is to teach the particular subjects in which their eminence is acknowledged. The only other institution in the metropolis with which it is comparable is University College. These two colleges are described in the University of London Statutes as "Schools of the University in all the faculties in which they respectively afford instruction." The medical schools of the metropolis generally are designated "Schools in the Faculty of Medicine." There is no necessary obligation for the schools in the Faculty of Medicine to concern themselves with the teaching of the preliminary and intermediate studies. It is notorious that the burden of provision for the teaching of such subjects has often been, and is now in many instances, a grievous one. There has never been any financial advantage in it. On the contrary, it signifies a constant outlay upon the various requirements for the exposition of the subjects and this, with the progress of science, is becoming, and cannot fail still to become, a more and more serious demand. It means the absorption of space which would be of the greatest possible value in supplying the needs for properly teaching the essentially hospital studies. It means that very often a man whose abilities lie in the direction of medicine or surgery rather than in that of pure science and who is conscientious in his work, spends a large amount of time in cultivating his knowledge of and teaching a subject the pursuit of which, whilst it is of no use whatever to him, probably displaces research in another direction which might be of great service to the science or art of his profession. How much better it would be if this work were undertaken by those who have made the study of these sciences their life work and the teaching of them their profession.

It is easy to understand how the medical schools have almost insensibly piled up on their shoulders the burden under which many now groan. The task of supplying such requirements in the old days was not a very severe one. But year by year the difficulty has increased until it has become well-nigh insupportable. The process, no doubt, has been a very gradual one, and in the earlier days indeed the idea of obtaining elsewhere than in the hospital the necessary teaching of more or less preliminary subjects did not enter into consideration. A young man entered at one of the hospitals and found there, as he expected, all that he needed for each step in the process necessary for acquiring a degree or diploma. The idea of going outside the hospital for any part of his education was practically never entertained. All that is now changed. The student of medicine may obtain, and as a matter of fact frequently does obtain, the teaching of such subjects as chemistry, physics, and biology where he likes so long only as he conforms to the regulations of the examining body by which his knowledge is to be tested. It is also notorious that the large majority of the students who pass their examinations in the early studies at Cambridge or Oxford up to and including anatomy and physiology come to London for their hospital studies and enter at any hospital they may choose to select. The idea that the student should necessarily carry out his "hospital studies" at Oxford or Cambridge is never contemplated. In the case of the many London students who do not go to the older universities and whose aim it is to obtain a degree at the University of London or the diploma of the Conjoint Board, it is evident that King's College has peculiar advantages to offer as a school for the preliminary and intermediate studies. Owing to its constitution as a complete collegiate institution it is necessarily equipped in its science faculty with all the requisites for education in the purely scientific subjects—those studies which have to be completed before the student need determine at which hospital he will enter to carry out his advanced or hospital studies. How to extend these advantages and to turn them to the best account in the new departure in which we are engaged has occupied the very earnest consideration of the council, in which it has received most valuable help from the professorial staff of the medical department.

It has appeared to us probable that some of the medical schools of the metropolis who wish to rid themselves of the incubus of providing education in the preliminary and intermediate studies (which, as I have said, is really no necessary part of the work of a medical school) might be glad to come to some mutual arrangement by which King's College would carry out this portion of the curriculum in its science faculty, leaving the student free at its close to complete his education by pursuing the advanced studies elsewhere. So long as King's College continued, as in the past, to receive practically only those students who intended to carry out their whole professional education under its wing it would, I need scarcely say, have been useless to expect that other schools would send their students to it for the early studies. In our new departure it is recognised that King's College, by the peculiarity of its constitution, has probably an increasingly important part to play in the education of the student in the early studies provided that the interests of the other medical schools are properly safeguarded. Surely this should not be beyond the reach of arrangement. I believe I am correct in stating that University College is proceeding on similar lines. By a curious coincidence the first two colleges of the University of London—University and King's—find themselves simultaneously, the former by its forthcoming incorporation with the University and the latter by the impending removal of its hospital to Camberwell, in an unusually favourable position for completely separating the department for the later medical studies from that which is concerned only with the preliminary and intermediate subjects. In each case the arrangements for teaching these latter will be so ordered that they will be able to be made use of by as many of the other schools as may desire to do so consistent with the amount of accommodation they are in a position to afford. The Institute of Medical Sciences projected by the Senate of the University will provide, in process of time and when the very large amount of funds requisite for the purpose are obtained, a third centre of the kind.

It has recently been suggested by a very eminent authority that a centre for the preliminary and intermediate studies

as a type of doctor of the old [illegible]
we know from the series of books which profess to have been written by Hippocrates, dating from the fourth and fifth centuries B C , in which the medical lore extant at that time is collected and codified with consummate ab
fundamental Hippocratic theory was essentially
Abnormal states of the fluids of the body were [illegible] of more account in the production of disease than changes in the solids Diseases, like everything else, were of divine origin, but come in the course of nature. They must be recognised by their histories and by physical signs and treated by diet and drugs, not by supernatural means Dietetics, pharmacology, and surgery were the three parts of medicine; for the last named a slight knowledge of the parts of the body was required but otherwise anatomy formed a very subordinate part of the Hippocratic education, probably, to some extent, on account of the difficulty of procuring material

As the later Hippocratists for the most part reduced the system of medicine to a mere routine of fixed rules they became known as Dogmatists It sufficed for their students to commit these rules to memory and to have a general knowledge of the Hippocratic literature. But among these codes there was much discordance in the different schools When in the third century B C the centre of medical education was transferred to Alexandria two rival dogmatic camps were there represented The leader of the school of Cos, who held fast by the Hippocratic humoralism, was Herophilus, but he recognised more keenly than Hippocrates the importance of anatomy as ancillary to medicine and prosecuted its study with zeal His rival Erasistratus, the exponent of the Cnidian tradition, although also an anatomist and in a certain sense a solidist, regarded most diseases as the result of faulty nutrition to be treated dietetically only, as he largely discarded the drugs and the practice of venesection which were the chief means of treatment recognised by Herophilus In revolt against the *a priori* routinism of the Dogmatics a new sect, the Empirics, arose who discarded all the pathology solidist and humoralist, of the true Hippocratists as well as all knowledge of anatomy For them diseases consisted of groups of symptoms, each of which had to be treated by its own remedy the choice of which was to be determined by considerations derived from the history of the case and from any analogies which the individual case might present with other cases in their experience A slender equipment of knowledge sufficed for the education of the Empiric and a six months' curriculum was considered long enough to fit a man for practice

The [illegible] all schools were mainly derived [illegible] dom. Theophrastus, the master [illegible] ected the existing herbal lore and wrote a history of plants for the use of physicians which was used by the Alexandrians. Three centuries later the larger work on the subject written by Dioscorides was adopted as a text-book by the Empirics and retained its position as the standard work on the subject until the fourteenth century of our era when it was replaced by the Antidotarium of Nicolaus of Salernum The want of solidarity among the Empirics led to confusion worse confounded in medical education and practice Every man was [illegible]

to Menander —

Ἰατρὸς ἀδολέσχος νοσοῦντι πάλιν νόσος
Πολλῶν ἰατρῶν εἰσοδός μ' ἀπώλεσεν.

This is a match for the Roman epitaph "Turba medicorum perii"

In Rome Cato, the censor, declaims against the Greek physicians in language worthy of an antivivisector, accusing [illegible] ugs, [illegible] our [illegible] tells [illegible] years ago some [illegible] Roman people [illegible] wed repugnance to an art whose insidious wiles caused the good to countenance the very worst, "for it is at the expense of our dangers that they learn and they gain experience by [illegible] policy of encouraging Greek [illegible] was initiated by Julius Cæsar, [illegible] the rights of Roman citizenship [illegible] a quarter of a million sterling. Not all were equally fortunate The graphic sketch of the needy doctor in Menaechmi, the prototype of Shakespeare's Pinch, who [illegible] use one of the victims in that [illegible] have been drawn from the life [illegible] r. Seringe in Vanbrugh's comedy *The Relapse*, who similarly desired to have the wounded Lord Foppington brought to his house; "that is the properest place," he says, "to bubble him out of his money."

During this period many reformers arose but none of them were strong enough to take the position of effective leaders and they only succeeded in founding new sects, of which the chief were the Methodists, Pneumatics, and Eclectics It was not until the second century A D. that this confusion was reduced to order by Claudius Galenus, the Pergamean. Galenus was a far-seeing sensible man, although a dull writer, but his treatises made up in volume what they wanted in rhetoric. Taking the Hippocratic writings as his starting-point (for he was essentially a Dogmatic) he insisted on the importance of the knowledge of the structure of the body and the functions of its several parts as the unifying groundwork of medical education. He developed the principle of classification in the description of diseases which had been begun by the Dogmatics and carried the same principle into therapeutics and so systematised the whole field of medical knowledge. He was, like all other reformers, hampered by the professional jealousies of his contemporaries who were for the most part Methodists, so that in spite of the influence of the Emperor Marcus Aurelius he did not enter into his kingdom during his lifetime But in a short time after his death the series of treatises which he left behind him, embodying as they did all that was best in the medical literature and knowledge of all the sects, completely supplanted the works of his predecessors and in process of time the whole of European and Western Asiatic medical practice and education became completely Galenical When Christianity became dominant Galen s works were peculiarly acceptable to the ecclesiastical controllers of education on account of their reverend theistic spirit and their recognition of the doctrine of final causes In later times and for the same reason they had a similar popularity among the Arabians. Throughout the dark ages as well as in the earliest universities the Galenical treatises became a sort of bible of physic to which little that was essential could be added and to deny [illegible] of heresy Such a [illegible] e unvarying routine [illegible] which [illegible] ical to [illegible] teenth
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The medical curriculum of the University of Cambridge formulated by statute in 1396 consisted of at least three years' lectures on medicine The subjects of these are prescribed as follows A twice repeated cursorial hearing of comments on Galen s Techne Iatrike, Prognostics, Aphorisms, and De Regimine, together with the reading of the Latin translations of certain Greek, Jewish, and Arabic commentators on his works—viz , the Isagoge of Johannicius, Theophilus's De Urinis, Philaretus on the Pulses, Isaac s Viaticum and his tract De Urinis, together with the Antidotarium of Nicolaus Præpositus of Salernum These latter commentaries are only to be [illegible] its. A two years exercise in the [illegible] also prescribed but the manner of t[illegible]

With the incoming of the humanistic renascence in Italy in the fourteenth century, which o[illegible]
signs of renewed life and growth [illegible]
science and methods of medical [illegible]
emerge from their protoplasmic condition and as each stage in their progress from the days of Petrarch to the present time has been associated either with some epoch making discovery or with some outstanding group of teachers we may conveniently summarise our sketch by following this association. One of the first tokens of the reformation was the division of the subjects of the medical course into two parts. The first of these they called the institutions or institutes of medicine, adopting the nomenclature which Gaius and Justinian had made familiar in Roman law The second division consisted of practical medicine The germ

tempted to make a passing reference to one who many years ago faithfully served this hospital, although the class of which he is a type is unfortunately rare, Thomas Young, physician, philosopher, and philologist. Before he entered as a student of medicine in his twentieth year Young had mastered the whole range of the Greek and Latin classics, and could express his thoughts in Greek iambics more easily than most of us can write English prose. He had read Dante, Don Quixote, and Kant in their original languages, and had a good working knowledge of Hebrew, Syrian, Arabic, and Persian before he was 16 years old. While yet a first year student he contributed a remarkable paper to the Royal Society on the mechanism of the accommodation of the eye to near and distant vision, and he was elected to the Fellowship of that body in his second year. In these days of specialisation it is difficult to imagine how a man in medical practice, as he was, should have been able at the same time to engage in the study and teaching of some of the profoundest branches of mathematical physics, and to carry on epoch-making researches in optics and acoustics, subjects in which his discoveries are classical, second only to those of Newton. While discharging his duties as clinical physician and lecturer here he was able to write 63 erudite articles for the Encyclopædia Britannica mostly on branches of physical science, and at the same time he was pursuing researches by which he discovered the key to the decipherment of inscriptions in the ancient language of Egypt. This is the kind of man that St. George's has had on its staff in the past. May there be in the present class some who will worthily follow in his footsteps!

It is right, however, to warn you that the medical curriculum and examinations are far more exigent and extensive to-day than they were in Young's time. No longer are examinations conducted after the pleasant manner of that by which he was admitted to the doctorate of medicine and surgery at Göttingen. "The examination," he says in one of his letters, "lasted between four and five hours. The four examiners were seated round a table well furnished with cakes, sweetmeats and wine, which helped to pass the time agreeably." Other delicacies adorn the tables of examiners nowadays, of which it cannot be said that they afford equal pleasure to the candidates. The course you begin to-day is long, laborious, and multifarious. No other profession or calling requires on the part of aspirants so much or so accurate knowledge, and yet withal the amount required for your examinations is almost an irreducible minimum. The bounds of all the sciences with which you are concerned are continually extending and before long you will readily echo the words of Koheleth, "In much wisdom is much grief, and he that increaseth knowledge, increaseth sorrow." The medical curriculum does not consist of a capriciously selected assemblage of subjects; it is the product of an evolution in which growth has taken place, attended with specialisation of function and consequent differentiation, and although, in accordance with the law of the survival of the fittest, superfluities are being occasionally lopped off, yet expansion proceeds apace in all directions. Each part that remains has a definite function and a necessary place in your training. The subjects are arranged in a strictly logical order, which is the crystallisation of the experience of the ages. Even though you forget everything else that I say let this remain in your memory. The studies of each year are based upon and presuppose those of the year before. If you scamp or neglect any of the first preliminary subjects your whole education and future practice will be unstable and incoherent—a house built upon the sand.

It may help you to understand something of this interdependence of the parts of your course if we review briefly the history of the development of the curriculum. In the time at our disposal I can only give you an impressionist view, sketched with a broad brush, of a few of the outstanding stages in this embryology. I am not going to inflict upon you a history of medicine. I only aim at presenting before you the stages of the development of the courses of instruction, attendance on which have from time to time been demanded of the student before he was allowed to practise his profession. The course of medical study consists at the present day of four parts. First, you are introduced to the wider general sciences upon which the theory and practice of medicine are based. These are physics, chemistry, and biology. Secondly, you have to master the special branches of these sciences, which treat of the normal structure and functions of the organism with which you are specially concerned, the twin sciences of human anatomy and physiology. Thirdly, you must study those departments of these sciences which deal with the weaknesses, irregularities, and alterations to which the parts of the body and their several functions are liable, their causes, and consequences. At the same time you have to learn the effects and influences upon these of the media and appliances which you will require to use in order to correct these faulty conditions. These subjects are named respectively pathology and pharmacology. Fourthly, as the crown of your labours, you must observe in the light of your knowledge of the three preparatory groups of sciences, particular abnormal states as they present themselves before you in the hospital, so that you may be able to employ to the best advantage the special remedial means for the correction of these states. This is the scope of practical medicine and surgery.

The links of this long chain have not been differentiated hastily. The history of medical education is one of progression from chaos to cosmos, from an incoherent folk-lore to the orderly arrangement of connected sciences the study of which you begin to-day. The crudest condition is still exemplified in the empirical pharmacology of the savage and this probably represents what was an early stage of its history in the childhood of humanity. Mankind from the first dawn of intelligence has been subject to two kinds of suffering, injury and disease. The causation of the former is generally material and obvious, that of the latter is not so, and by primitive man was probably, as among savages now it is actually, attributed to the agency of unseen and hostile influences. To combat these evil spirits occult measures were devised by the priests of the tribal cultus and in this manner the primitive traces of medicine appear as branches of what, for want of a better term, we may call magic. By a long-continued process of accident, trial, and error the effects of certain empirical modes of treatment for human ills came to be recognised by these priestly sorcerers, and as the knowledge of these remedies enhanced the power of the priesthood they were jealously kept secret and only transmitted to those initiated into the sacerdotal order. In this state medicine remains among savage and barbaric peoples to this day and beyond this level the art of medicine did not rise even in the comparative civilisation of ancient Egypt, India, and China. The notion that medicine as a science was cultivated in Egypt has been for some time a popular fallacy. At one time I was disposed to credit the ancient Egyptian priest-physician with a quality and degree of knowledge of a higher grade, but the application of a strictly critical method in the study of the extant medical papyri with a rigid restraint on the tendency to read modern ideas into the obscure expressions of these ancient writers have compelled me, though reluctantly, to modify my opinion. Despite their practice of opening bodies for the purpose of embalming the knowledge of anatomy among the Egyptians seems to have been of the slightest; their acquaintance with pathology was *nil;* their surgery was beneath contempt, as is shown by the maltreated fractures and dislocations not uncommon in the bodies of mummies; their medicine was a combination of magical spells and crude polypharmacy showing no trace of a philosophy or of a unifying hypothesis underlying their modes of treatment. Their medical education apparently consisted of the learning of priestly traditions, incantations, and empirical methods. This is all that is claimed by the author of the bombastic preface to the Papyrus Ebers, written about B.C. 1500, although he records that he had made the round of the priestly schools of Egypt.

Our European medical education owes its parentage to Greece rather than to Egypt, for although the Greek philosophers derived much inspiration as to the material of their knowledge from Egypt, yet their methods were wholly their own and this is equally true of medicine as of philosophy. Even at the earliest period known to us the Greek had got ahead of the Egyptian. In the Trojan war Machaon cured by remedies, not by spells; and later we find that medical teaching, such as it was, belonged to the schools of philosophy rather than to the temples. There was, of course, plenty of superstition among the people. The nineteenth century has had no monopoly of Eddys and Dowies. As Greece was the theatre of conflicting philosophies it is not surprising that its teachers of medicine were as little in accord. Cos, Cnidus, and Rhodes were among the most famous of its schools, to which may be added Crotona in

its own type of doctrine. The teaching of the Coan school we know from the series of books [illegible] written by Hippocrates, dating [illegible] centuries B.C., in which the medi[illegible] is collected and codified with [illegible] fundamental Hippocratic theory [illegible] Abnormal states of the fluids of the body were regarded [illegible] of more account in the production of disease than changes in the solids. Diseases, like everything else, were of divine origin, but come in the course of nature. They must be recognised by their histories and by physical signs and treated by diet and drugs, not by supernatural means. Dietetics, pharmacology, and surgery were the three parts of medicine; for the last named a slight knowledge of the parts of the body was required but otherwise anatomy formed a very subordinate part of the Hippocratic education, probably, to some extent, on account of the difficulty of procuring material.

As the later Hippocratists for the most part reduced the system of medicine to a mere routine of fixed rules they became known as Dogmatists. It sufficed for their students to commit these rules to memory and to have a general knowledge of the Hippocratic literature. But among these codes there was much discordance in the different schools. When in the third century B.C. the centre of medical education was transferred to Alexandria two rival dogmatic camps were there represented. The leader of the school of Cos, who held fast by the Hippocratic humoralism, was Herophilus, but he recognised more keenly than Hippocrates the importance of anatomy as ancillary to medicine and prosecuted its study with zeal. His rival, Erasistratus, the exponent of the Cnidian tradition, although also an anatomist and in a certain sense a solidist, regarded most diseases as the result of faulty nutrition to be treated dietetically only, as he largely discarded the drugs and the practice of venesection which were the chief means of treatment recognised by Herophilus. In revolt against the *a priori* routinism of the Dogmatics a new sect, the Empirics, arose who discarded all the pathology, solidist and humoralist, of the true Hippocratists as well as all knowledge of anatomy. For them diseases consisted of groups of symptoms, each of which had to be treated by its own remedy the choice of which was to be determined by considerations derived from the history of the case and from any analogies which the individual case might present with other cases in their experience. A slender equipment of knowledge sufficed for the education of the Empiric and a six months' curriculum was considered long enough to fit a man for practice.

The remedies in use among all schools were mainly derived from the vegetable kingdom. Theophrastus, the master of Erasistratus, had collected the existing herbal lore and wrote a history of plants for the use of physicians which was used by the Alexandrians. Three centuries later the larger work on the subject written by Dioscorides was adopted as a text-book by the Empirics and retained its position as the standard work on the subject until the fourteenth century of our era when it was replaced by the Antidotarium of Nicolaus of Salernum. The want of solidarity among the Empirics led to confusion worse confounded in medical education and practice. Every man was [illegible] of this anarchy the [illegible] its practitioners was [illegible] ece this occasionally [illegible] sometimes attributed [illegible]

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In Rome Cato, the censor, declaims against the Greek physicians in language worthy of an antivivisector, accusing them of conspiracy to murder the Romans with their drugs, "exercising their profession for hire that they may win our [illegible] asily." Pliny also tells [illegible] Roman people showed [illegible] wiles caused the good to countenance the very worst, "for it is at the expense of our dangers that they learn and they gain experience by putting us to death." The policy of encouraging Greek physicians to settle in Rome was initiated by Julius Cæsar, who conferred on all such the rights of Roman citizenship. [illegible] that Stertinius and his brother amassed thereby a fortune of [illegible] of a million sterling. Not all were equally [illegible] The graphic sketch of the needy doctor in [illegible], the prototype of Shakespeare's Pinch, who [illegible] use one of the victims in that [illegible] have been drawn from the life. [illegible] r. Seringe in Vanbrugh's comedy *The Relapse*, [illegible] he wounded Lord Fopping [illegible] that is the properest place [illegible] his money." [illegible] none of them [illegible] ective leaders [illegible] of which the [illegible] Eclectics. It was not until the second century A.D. that this confusion [illegible] us Galenus, the Pergamean. [illegible] sible man, although a dull [illegible] in volume what they wanted in rhetoric. Taking the Hippocratic writings as his starting-point (for he was es[illegible] e importance of the [illegible] y and the functions o[illegible] work of medical education. He developed the principle of classification in the description of diseases which had been begun by the Dogmatics and carried the same principle into therapeutics and so systematised the whole field of medical knowledge. He was, like all other reformers, hampered by the professional jealousies of his contemporaries who were for the most part Methodists, so that in spite of the influence of the Emperor Marcus Aurelius he did not enter into his kingdom during his lifetime. But in a short time after his death the series of treatises which he left behind him, embodying as they did all that was best in the medical literature and knowledge of all the sects, completely supplanted the works of his predecessors and in process of time the whole of European and Western Asiatic medical practice and education became completely Galenical. When Christianity became dominant Galen's works were peculiarly acceptable to the ecclesiastical controllers of education on account of their reverend theistic spirit and their recognition of the doctrine of final causes. In later times and for the same reason they had a similar popularity among the Arabians. Through- [illegible] in the earliest universities [illegible] a sort of bible of physic [illegible] could be added and to deny any part of which constituted a species of heresy. Such a series of text-books completely suited the unvarying routine and uniformity of method of the ruling scholasticism which subordinated all teaching to the church and was inimical to [illegible] he fourteenth [illegible] of all medical [illegible] t superstitious [illegible]

The medical curriculum of the University of Cambridge formulated by statute in 1396 consisted of at least three years' lectures on medicine. The subjects of these are prescribed as follows. A twice-repeated cursorial hearing of comments on Galen's Techne Iatrike, Prognostics, Aphorisms, and De Regimine, together with the reading of the Latin translations of certain Greek, Jewish, and Arabic commentators on his works—viz., the Isagoge of Johannicius, Theophilus's De Urinis, Philaretus on the Pulses, Isaac's Viaticum and his tract De Urinis, together with the Antidotarium of Nicolaus Præpositus of Salernum. These latter commentaries are only to be read once without comments. A two years' exercise in the practice of medicine is also prescribed but the manner of the practice is not specified.

With [illegible] in Italy, in the [illegible] inquiry, signs o[illegible] medical science [illegible] ese now emerge [illegible] ch stage in their progress from the days of Petrarch to the present time has been associated either with some epoch-making discovery or with some outstanding group of teachers. We may conveniently summarise our sketch by following this association. One of the first tokens of the reformation was the division of the subjects of the medical course into two parts. The first of these they called the institutions or institutes of medicine, adopting the nomenclature which Gaius and Justinian had made familiar in Roman law. The second division consisted of practical medicine. The germ

of this division exists in Galen and is implicit in the Canon of Avicenna, the ablest of the Arabian medical authors. Now, however, the distinction becomes explicit. Under the term "institutes" were grouped all that was then known of the fundamental and auxiliary subjects—anatomy, physiology, medical herbalism and remedies, pathology, astrology, and alchemy. Many treatises on these institutes were written; one of the earliest is the "Liber Pandectorum Medicinae" by Silvaticus, written in 1317, published at Strasburg in 1475. Others by Mayr, Horstius, Heurnius, Riverius, Ettmuller, &c., appeared later.

Horstius divided his institutes into five parts—*physiologike*, *pathologike*, *semeiotike*, *hygiene*, and *therapeutike*. To these Heurnius adds *prophylaktike*, which he divides into *gerokomiko* and *analeptiko*. In some universities professorships of the institutes of medicine were founded with this wide scope of commission: that of Leyden was one of the most famous in the seventeenth century and, chiefly following its example, a professorship under this title was established in Edinburgh in 1724.

Another early fruit of the movement was the reformation of anatomy. Strangely enough, the period of Galenical domination had been one in which practical teaching and research were paralysed. For this Galen himself was not responsible, for he both practised and recommended dissection and down to the end of the second century we know that both dissection and vivisection were performed in many places. Theophanes tells us of such researches taking place in Moesia (Chronographia A.M. 6256 = A.D. 76.) But the Church forbade the practice and the anatomy of the schools was learned only from the Galenical writings. Even when the prohibition was rescinded in the fourteenth century, Mondini, Achillini, and their immediate successors were so saturated with the Galenical tradition that they saw everything with Galen's eyes. The humanist reformers Berengario de Carpi, Eustachi, Fallopius, and especially Vesalius realised that the only kind of anatomical knowledge which is of use in medicine is that obtained by direct observation; and by direct appeal to the body they delivered anatomy from the effete Galenical tradition and taught the subject practically by lectures and class demonstrations. [illegible] was not until a much later period, in the eighteenth [illegible]y, that anatomical laboratories were established, in [illegible] the students themselves were obliged to perform [illegible] dissection. In this country we owe the enforcement of practical anatomy chiefly to the influence of members of your own hospital, William and John Hunter.

The rapid development of anatomy, especially after the publication of the great work of Vesalius, led to the differentiation and segmentation of this subject from the body of the institutes, but the border line of cleavage was at first by no means clear. By the anatomist structure and function were studied side by side, the former practically, the latter theoretically; but the special and practical research into function received an immense stimulus from the discovery of the circulation of the blood by Harvey in 1619. This opened the way to a long train of more or less correlated discoveries, more especially as shortly afterwards the microscope became available as an instrument of research. Within a short time the capillary circulation, the blood corpuscles, and the lymphatic system were discovered. As every such addition to knowledge opened out fresh fields for investigation, which required other means than those of the dissection-room for their prosecution, this domain of function became for the most part annexed by the professors of institutes of medicine, and as by the end of the eighteenth century most of the other branches had been shorn off from the institutes that title became practically synonymous with physiology. It was not until within the last five years that the title was discarded in Edinburgh, while in Dublin the old title of Professor of Institutes of Medicine is still retained for the Professor of Physiology. As with anatomy, the new subject was first taught by lectures and demonstrations, but as its importance became more fully realised practical work in the laboratory became a necessity and now forms one of the most essential parts of the work you have to do. The names of Sharpey and Foster should be specially remembered in connexion with the development of this subject. The scope of physiology, however, had in the eighteenth century been completely altered from that which was comprehended under that title at earlier times. In the beginning of the seventeenth century it included the elements, the temperaments, the faculties, the humours, and some fanciful notions concerning the development of the fœtus.

It may be interesting here to see as an evidence of progress the extent of the medical curriculum of the University of Cambridge for the degree in medicine in 1700. Medicine was then represented in the professoriate by the Regius professor of physic alone. The course was one of six years, during which the candidate had to be present at two dissections at least and had twice to respond in discussions. The student in surgery had, in addition, to make two dissections at least himself and was required to bring proofs that he had effected at least three cures before he was admitted to practise. The Galenical curriculum had been abolished by the statutes of Queen Elizabeth. By the end of the eighteenth century these requirements had undergone simplification. The University at this date had a professor of anatomy, of chemistry, and of botany as well as one of medicine, but the student was left to his own discretion as to the method in which he acquired his knowledge, no attendance at lectures being prescribed or any definite course suggested.

The earliest lecturers on anatomy even in Galenical times illustrated their teaching by the comparison of human structures with those of other animals. As knowledge advanced in matters of detail this method of instruction assumed a new importance, because it was found that many structures which were not easily unravelled or examined in man could be more readily understood from the forms in which they occurred in simpler organisms. Your own John Hunter was one of the greatest contributors to the growth of this subject, and he erected his most enduring monument in the physiological series of organs which he arranged in his great museum. Towards the end of the eighteenth century this subject became so large that it was made the theme of independent lectures. In 1767 the University of Edinburgh founded a professorship of natural history to provide for this want, and some years later other similar courses were established elsewhere. By this process of segmentation another subject, that of zoology, was added to the curriculum in some schools.

It has been already noted that as the majority of remedies used in early medicine were derived from the vegetable kingdom, the work of Dioscorides had been admitted alongside of the Galenical writings as part of the mediæval medical course. By means of this book or of some other ancient Herbal the student was taught to recognise and to gather the simples which had to be prepared and compounded for his master's prescriptions. To provide the necessary teaching for this purpose the first professorship founded in the Medical Faculty of the University of Edinburgh was one of medical botany in 1676, and the first laboratory there was the Physic Garden, arranged after the model of the much more ancient Physic Garden in Leyden over which the great Boerhaave, professor of institutes of medicine, presided. This plant-lore was twofold—one part consisted in the knowledge of the characters whereby the several plants can be identified, and the other of the selection and preparation of such parts as were used in medicine. Out of the synthesis of these, with the corresponding kind of knowledge of the mineral and animal remedial agents, there was made up an incoherent and heterogeneous farrago, to which the name "materia medica" was given. All this at first had belonged to the province of institutes of medicine, but several causes concurred to produce cleavage in this unwieldy mass of knowledge. By the labours of Ray, Tournefort, and Linnæus botany had become a separate science and claimed attention on the one side, while, on the other, the publication early in the seventeenth century of the Pharmacopœia of the College of Physicians gave a concreteness to the subject of materia medica which rendered its separate treatment necessary. No longer was the student obliged to refer to Dioscorides, or to the Antidotaria great and small of Nicolaus, or even to the Dispensatorium of Valerius Cordus. In Edinburgh this separation was recognised in 1768 by the formation of an independent professorship of materia medica. This became, therefore, shorn away from botany, although the title "professor of medicine and botany" remained united in Edinburgh until about 30 years ago.

But other forces have been at work in modifying the development of these portions of medical study. Some of the new growing departments, such as physiology, now make large drafts on the student's time; therefore it has become

necessary to lighten the burden by cutting off all superfluities

Systematic botany and zoology are deeply interesting sciences, but their bearing on the practical objective of medical study is remote Each science however contains an element of permanent importance In the plant some of [illegible] and organisation are dis[illegible]scle, and these can be [illegible] by observing them in the vegetable than in the animal In the structure of certain animals we can see almost a diagrammatic scale the growth and development of tissues and organs which are not so easily observed in man, and some types preserve permanently conditions that are transitory in the human body The examination of such forms is indispensable to help the student to understand the formati[illegible] its of the human organism [illegible] medical schools the great bu[illegible] has been removed from the curriculum a new eclectic department has been constituted under the name elementary biology by the selection of such plants and animals as in the ways above indicated illustrate fundamental principles and elucidate conditions met with in the human body As this new subject is intended to make human anatomy and physiology more easy of comprehension its study must take precedence of these and it is now properly regarded is one of the most important parts of your education in the first year of your course It is really the introductory chapter of these more special sciences, but to be of use it is essential that it should be a laboratory rather than a lecture course We owe this great step in simplification chiefly to the influence of the late Professor Huxley, ably seconded by the work of the late Professor Rolleston of Oxford

Another change in the direction of lightening the burden on the student is taking place by a natural process of evolution The extraordinary jumble of facts which goes by the name of materia medica, and which has been so long an incubus, is undergoing a process of reformation by which in the course of time the greater part of it must be excised from the course This change has taken place in some universities, but is bound to become general When I was a student materia medica consisted of three groups of subjects that were essentially distinct from each other the first from which it derived its name, consisted of an account of the names, characters, and sources of the raw materials of the medicaments in use, the second, of the methods of preparing from these raw materials the several extracts and compounds that are used in prescriptions, and the third of the [illegible] drugs [illegible] e has come into operation here [illegible] ures medicaments can get them in the exact form in which he needs them for use from respectable firms of chemists whose character is sufficient guarantee for the purity of the materials and the care with which they are prepared The whole of the first and most of the second group of subjects have therefore become obsolete All that is essential for the student to know is the names and proportions of the active ingredients in the official doses If he have learned his [illegible] more anon) he will know how [illegible] n his prescriptions As for the third part which is pharmacology proper it cannot be taught satisfactorily by lectures but must be learned by observation in the physiological and pharmacological laboratories and in the wards of the hospital To get a kind of bowing acquaintance with the appearances of the preparations a short period of practical compounding work is all that is necessary, and beyond that the Pharmacopœia itself supplies all that the student needs to know

In no branch of knowledge has the free inquiry which was the spirit of the renascence reaped such an abundant harvest as in the sciences which deal with matter and energy Paracelsus and his followers of the Iatro chemical school in spite of their charlatanry their futilities and chimeras deserve credit for having started those researches which broke down the puerile notions of the composition of matter that had held sway since the beginning of Greek philosophy, but it was Robert Boyle who finally freed chemistry from its magical associations and paved the way for its true development Modern chemistry has grown to be one of the greatest and most far reaching of the sciences and every year its bearing on the problems which the physician has to solve becomes more intimate A practical knowlege of chemistry is therefore an essential prerequisite for the successful prosecution of medical study Chemistry constitutes a large element of physiology and is a growing factor in pathology while in pharmacology and therapeutics modern research has shown the close relations which subsist between chemical combination and physiological action It is needless to say that in the eighteenth and nineteenth centuries chemistry was purified of its mystical elements and studies of the Alchemist, of the chalybs and chaos of the Sophists of the magistery and such like had disappeared from the requirements of the student You cannot make any progress in these applied sciences of physiology and pathology unless you have laid a solid foundation of chemical knowledge Therefore it has been universally recognised that chemistry must form an element in your studies during your first year

The science of the forces of nature—experimental physics—has grown up side by side with chemistry and is an equally indispensable part of your first year's study No development in modern medicine is more remarkable than the recognition of the importance of the mechanical and physical phenomena which form so large an element in physiology and of the physical methods of diagnosis and treatment Thermometry and physical methods of thermotaxy, auscultation ophthalmoscopy, and other kindred processes presuppose an intelligent knowledge of certain branches of physics while the varied uses of electricity and the growing importance of photo therapeutics will form a considerable element in your future practice These physical methods have come to stay and you cannot know your business unless you have had a practical training in the use of physical apparatus in the laboratory It is the knowledge of these subjects that makes the difference between the new medicine and the old In the seventeenth century physic was deprived of its astrological connexions, although even down to the beginning of that period the surgeon's apprentice was required to know the 12 zodiacal signs and the student of medicine in Utrecht was recommended in 1633 by Heurnius to acquaint himself with the planetary ephemerides No longer is it of importance to remember such aphorisms as that of Cardan that no surgical operation should be performed while the sun is in Scorpio

I have said enough to show that it is in accordance with a strictly logical principle that you are put to study these three sciences chemistry physics and biology in your first year When you have passed your examination in these you are not done with them You must carry your knowledge of them all through your life and the man who neglects them in his first year will be haunted through life by the ghost of his lost opportunities spectres whose persecution will at last oblige him at a later stage to waste precious time in the belated attempts to acquire knowledge that should have been learned long before *carpe diem quam minimum credula postero* And what is true of these is equally true of the studies of your second and third years You are not studying anatomy and physiology to pass your examinations but to use your knowledge of them in after life All these sciences are the tools the use of which you have to learn in the period of your apprenticeship and he is an inept workman who throws aside his tools when he becomes a journeyman or master Modern medical practice is the application of these sciences to the treatment of disease or accident

I have exhausted your patience in dealing with the history of the first and second stages of the training that you are about to undergo so I shall trace the evolution no further in detail but the process is going on and leading to differentiation in the final studies of your course At all periods attendance at hospital or some equivalent thereto has been obligatory but it is in the memory of some of us that until about the middle of last century arrangements for clinical instruction were often haphazard and unorganised I well remember being one of a mob of students who followed the surgeon round the wards on the chance of picking up some crumbs of wisdom from him and I fear I know that not a few of my class fellows got their licences to practise without ever having put on a bandage "taken" a case, written a prescription or used a stethoscope With the admirable system now in use in all hospitals this state of things would be an impossibility Every man must put his hand to the work and must give evidence of practical knowledge not only in general medicine surgery, and obstetrics but in diseases febrile, topical and tropical, hygiene, preventive

of Fischer on the sugars is also of interest. Not only has he produced synthetically grape and fruit sugar but he has also made a large number of artificial sugars. Most of these he has found to be undecomposed by such ferments as yeast. Again, others are decomposed by ferments more rapidly and are probably of more value as foods; and as the sugars and the allied starches (albuminoid substances excepted) are the most important of all foods, their chemical investigation is of the highest importance to the medical man. This question of the action of ferments must ultimately be answered by the chemist, and as these processes of fermentation are largely connected with vital phenomena their significance cannot be over-rated.

The physiological action of toxins and antitoxins has for some time largely engaged the attention of medical science, but it will probably be the chemist, after he has determined their molecular structure, that will be able to explain how and why they are produced. In the process of the assimilation of food the changes that occur are purely chemical. The composition of the various secretions also can only be arrived at by an analysis in a chemical laboratory. The composition of the excreta is also of the utmost importance in diagnosing whether the living machine is in proper working order and whether each particular organ is producing its own proper waste products. In every case the chemist must be consulted; he may be a pathological, a physiological, or a pure chemist. Physicians, the scientific representatives of practical medicine, to be eminently successful in their profession must without doubt be able to understand the general aims and objects of these various branches of chemistry, and this they are unable to do unless they have at least mastered the elements of the science. In the case of specialists it is even more necessary, for the human body is the most wonderful laboratory in existence. In it the raw material is changed to the most complex products. These in turn are used for their proper purposes, thrown aside, and finally got rid of. It is the province of the physician to keep this marvellous laboratory in working order; but how is this possible should he be ignorant of the general method of how these changes go on? It is useless to expect that by merely oiling a motor-car the effects of using bad petrol or of defective sparking can be eliminated. Obviously, therefore, the medical man who is able to understand the bearing of chemical research on the problems connected with this human laboratory is far more competent to direct the working of it, for he has a wider horizon, more knowledge, and consequently greater power.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY.

INAUGURAL ADDRESS BY A. W. CROSSLEY, D.SC. VICT., PROFESSOR OF CHEMISTRY TO THE SOCIETY.

THE address may be briefly summarised as a plea for the fuller and wider recognition of pharmacy both as a science and as a profession. To this end Professor Crossley addressed his remarks directly to the students present, urging upon them the great responsibility which they had undertaken. His experience as a member of the Examining Board of the Pharmaceutical Society had shown him that few of the candidates approached their work in a really scientific spirit but that rather they adopted the British Pharmacopœia as the alpha and omega of the life of a pharmacist, as if anything not contained therein was neither of them nor for them. Candidates often failed to realise their individual responsibility or the magnitude of the task that they had set themselves in aspiring to a knowledge of pharmacy. He then proceeded to consider the claims of pharmacy to rank as a profession in addition to being a great applied science. He deplored the lack of the use of scientific knowledge which characterised so many business men in this country and had, perhaps, fostered the great distinction made between business and profession. Knowledge in the wide sense was deemed the monopoly of the professions but rightly regarded nothing was more necessary to the engaging in any large business than a thorough and scientific comprehension of the underlying causes which influenced that business. According to one distinction the buying and selling of tangible goods was a business, whereas the dispensing of knowledge was a profession. But surely there was scant difference between the actual processes of buying and selling goods and of buying and selling knowledge. "It is not the actual method of procedure which distinguishes between a business and a profession but the difference is rather due to the character, work, and mental powers of those engaged, which if of a sufficiently high order may raise any calling to the rank of a profession." Professor Crossley quoted passages from Ruskin's "Unto This Last," in which the five great intellectual professions were defined as those of the soldier, the pastor, the physician, the lawyer, and the merchant. The merchant, it was argued, had scope equal to that of any other calling for becoming a great professional man. Pharmacy consisted not merely of a knowledge of simple chemical bodies but also of acquiring an insight into the methods of extraction, purification, and properties, both chemical and physiological, of some of the most complicated vegetable substances. Pharmacy was thus one of the greatest of applied sciences and also had clearly a double claim to rank as a profession, for the pharmacist must be considered as being in part a merchant and in part a physician. Professor Crossley strongly urged the necessity for every student of pharmacy and for every pharmacist to engage in research at every stage of their career. The lack of observation, he suggested, was the primary reason why research was so rare among students. This want of observation was fostered by the text-books of the day in which all problems were so fully elucidated that little or nothing was left to stimulate the reasoning powers of the student himself. It should be the endeavour of every student to spend some time in a research laboratory, for it was there, and there only, that any serious attempt was made to teach a student to observe and to think for himself. Following this train of thought he dwelt at some length on the inroads which physics had made into the domain of chemical research and said that he would have every student who wished to advance in his profession acquire all possible knowledge of physics, including a necessary amount of mathematics. This need had evidently been recognised by the Pharmaceutical Society which had recently made extensive alterations and additions in its school for the teaching of practical physics.

ON EXCLUSION OF THE INTESTINE.

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BY the term "exclusion of the intestine" is meant the rendering inactive any part of the intestinal canal by surgical means. When entero-anastomosis is performed the length of intestine which lies between the two openings is "excluded." When the intestine is cut across, the distal end closed and the proximal end united to the side of the distal, the part of the gut which lies between the two points dealt with is "excluded." When, finally, the intestine is divided at two points and the proximal end of the upper and distal end of the lower are closed, left open, or united, the intervening portion is "excluded."

In the operation of entero-anastomosis as suggested by Maisonneuve the exclusion is certainly not always complete. Le Dentu[1] in two cases of intestinal fistula united the gut above to the gut below the opening in the hope that the current of intestinal matters might be caused to deviate and that thereby the fistula might close spontaneously. The fistula, however, continued to discharge in each case. Similarly, in a case of ileo-sigmoidostomy performed for obstruction due to a growth in the hepatic flexure I made a small opening in the cæcum to give vent to a large collection of fæces and flatus. The growth in the colon was subsequently excised but for several weeks there was some escape of fæces through the typhlotomy opening.

The following forms of intestinal exclusion are recognised:—1. Entero-anastomosis, as suggested by Maisonneuve. The "short-circuiting" of English writers (Fig. 1). 2. Entero-anastomosis with constriction by suture of the part distal to the upper opening (Fig. 2). 3. Unilateral exclusion. When the gut is divided completely across and the proximal end is implanted into the side of the distal. The distal end may be closed or may be left open (Fig. 3). 4. Bilateral exclusion. When the bowel is divided at two

[1] Revue de Gynécologie et de Chirurgie Abdominale, Paris, 1899, vol. iii., p. 81.

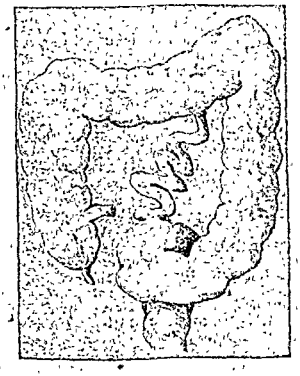
FIG. 1.

Intestinal exclusion, entero-anastomosis.

FIG. 2.

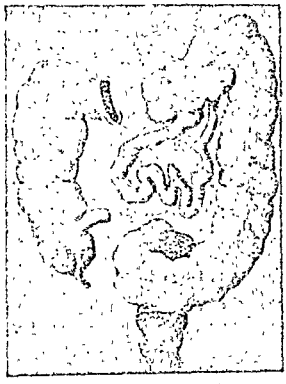
Entero-anastomosis with constriction by suture of the part distal to the upper opening.

FIG. 3.



Unilateral exclusion.

FIG. 4.



Bilateral exclusion, the distal end of excluded gut left open.

FIG. 5.

Bilateral exclusion. Both ends of excluded gut closed—fistula.

places and the intestinal channel is restored, leaving a segment of the bowel detached. Of this segment one end may be left open and stitched to the skin (Fig. 4) or both ends may be closed when a fistula exists in the bowel lying between them (Fig. 5).

In all operations of this kind it is desirable to open the abdomen, if possible, in the middle line. The incision should be made at a distance from any fistula or any skin involvement. In such circumstances it may be impossible to obtain a clear view owing to complex adhesions, or even to open the peritoneal cavity without wounding, or perhaps opening some adherent coil of the bowel. When the peritoneum has been opened the intestine leading to, and coming from, the involved segment is defined. This is not always an easy matter, especially when many adhesions are present. It is desirable to work from some fixed point, the cæcum by choice or the duodeno-jejunal flexure. When the proximal and distal portions of the bowel have been recognised the former is divided completely across. The method of dividing it depends upon the purpose of the operator. If an end-to-end or end-to-side anastomosis is to be performed it is divided between two clamps, the blades of which are sheathed with rubber tubing. If the ends are to be closed and a lateral approximation is to be made (which is the method of choice when the small intestine has to be united to the larger) then the bowel is crushed by forceps, which divide all the coats except the peritoneum, two catgut ligatures are applied in the groove left when the forceps

are removed, and the bowel divided between the ligatures. The stump on each side is then buried by a continuous suture.

In unilateral exclusion an end-to-side anastomosis is performed. As a rule the distal end at the point of division of the bowel may be closed, but in certain circumstances it may be left open, either for purposes of drainage or to afford an opportunity for the irrigation of a septic area.

In bilateral exclusion one end at least of the sequestrated segment must be left open. As a rule this should be the distal opening, so that peristalsis may help in its emptying. If both ends are to be left open they may be brought out side by side through the same incision, not necessarily the original incision, or a separate opening may be made for each. In rare cases the loop thus cut off may be short and may have a free opening with the surface; both ends may therefore be closed. This, however, is neither prudent nor desirable. Vautrin has urged that when the excluded portion of the gut is infected or sloughing and foul from cancerous ulceration the two ends should not be laid side by side, so that the channel from one to the other is circuitous, but that two openings should be made, one for each end of the gut, which should lie untwisted and free from kink between them. Free irrigation of the coil is then possible.

When bilateral exclusion has been performed some operators have closed both the ends of the sequestrated coil. This practice has indeed been advocated by Obalinski, but in a later publication he decides that it is inadvisable in the case of the small intestine though permissible when the large intestine alone is involved. The practice has led to disaster. In many cases (Eiselsberg, Delagénière, Roux) the excluded intestine has had to be opened, as symptoms of urgency were arising from the distension of the bowel. There can be no hesitation in condemning unequivocally any adoption of this method. It is unsound in theory and disastrous in practice.

In cases of unilateral exclusion the question has arisen as to whether the bowel between the point of division and the point of the lateral anastomosis undergoes any change Experimentally it was found by Senn and others that it tended to undergo atrophy. The bowel withered and its lumen became lessened and its vessels thin and shrunken. In the majority of recorded cases, however, it has been found that the intestinal contents have tended to pass backwards and fistulæ in the excluded coil have continued to discharge. According to Delore and Patel[2] and Hartmann[3] the only occasions upon which the excluded bowel remains absolutely empty are those in which the ileum has been divided near its termination and the proximal end implanted into the colon. The ileum between the point of section and the ileo-cæcal valve then remains permanently empty, for regurgitation is stopped at the valve. There is, without doubt, some difference in this regard between unilateral exclusion performed upon the large and upon the small intestine. When performed upon the small intestine it is known both by experimental evidence and as the result of operations upon man that the excluded loop is constantly filled with fæcal material. If the proximal end of the excluded loop remains open to the surface the discharge from it rarely ceases for more than a few hours. A fistula therein does not close. Unilateral exclusion of the small intestine does not offer, therefore, any advantages, either immediate or remote, over the entero-anastomosis of Maisonneuve. In the large intestine the conditions are slightly different. When the ileum is divided near its termination and the proximal end is implanted into the ascending colon there is some backward flow as far as the ileo-cæcal valve. The lower end of the ileum remains empty. If the proximal end be implanted into the sigmoid flexure there is little or no flow backwards along the descending and transverse colon during the early period. At a later stage of the case there may, however, be some passage of fæcal material backwards towards the cæcum. Drucbert, in his experimental work upon dogs, found that during the first few weeks after the operation the motions were frequent and fluid in character. As time passed they became less frequent and more solid and eventually the bowel movements were natural both in frequency and character. If the intestine was examined during the early stage the colon was always found empty and flaccid; during the later stage the colon had come to act as a reservoir from which a surplus quantity was from time to time discharged. These observations are confirmed by the experiences in man. In a case of unilateral exclusion, the ileum being joined to the sigmoid flexure, Jaboulay found that at first the motions were frequently discharged and were always fluid; after a time they became semi-solid and at last normal. Körte has recorded a case of tuberculous disease of the cæcum treated by excision, followed by the implantation of the ileum into the sigmoid flexure. After the anastomosis had been completed the colon was narrowed by sutures in order to prevent regurgitation towards a fistula in the ascending colon. For six and a half months there was no discharge from the fistula; at the end of that time, however, fæces again passed through it. Körte then cut across the colon at the splenic flexure and closed both ends. The fistula ceased to discharge. The conclusion to be drawn from the evidence furnished both by experimental work and by experience of cases in man is that unilateral exclusion of the small intestine offers no advantages over entero-anastomosis and in the large intestine does not prevent, at any rate for more than a short period, the backward flow of fæcal matter.

The operation of bilateral exclusion has long been known as a laboratory method of cutting off from the intestinal current a segment of intestine for the purpose of studying *the nature of the intestinal juice. A certain length of* intestine is cut out, the intestine above and below it is united, and both ends of the loop are completely closed. A fistula is then made to the middle of the loop. This method of investigation was first suggested by Thiry in 1864. It was modified by Vella who, instead of closing the ends, left them both open and brought them to the surface. The fistula is generally known as the "Thiry-Vella fistula." Lance[4] has collected the notes of 76 cases of bilateral exclusion performed in man. In eight cases it has been practised upon healthy intestine for the purpose of causing to close a fæcal fistula resulting from operation or from strangulated hernia. All the cases recovered; in three a subsequent removal of the fistulous loop was successfully performed. In the remaining 68 cases the exclusion was practised for various lesions, such as chronic invagination, chronic colitis, tuberculosis of the large intestine, cancer, pyo-stercoral fistula, and vaginal fistula. In no cases was there any ill effect attributable solely to the method. As a rule when a fistula from the excluded loop was not already present the two ends of the intestine were brought to the skin and sutured there. This procedure is sometimes known as "Hochenegg's method" of exclusion. The pre-existing fistulæ closed in all the cases except those in which malignant disease was present. As a rule, only one end of the loop remained permanently open, the other gradually dwindling in size and eventually becoming quite closed.

Exclusion of the intestine was first performed in man by Trendelenburg on Dec. 2nd, 1885. It is, however, to von Hacker that we owe the first deliberate suggestion, put forward in 1888, that complete exclusion of the intestine might be a successful means of treating certain lesions of the bowel complicated with adhesions and fistulæ. The suggestion did not attract general attention, it had indeed passed almost without recognition until Salzer in 1891 and in 1892 gave it prominent advocacy. In reviewing a series of clinical records Salzer endeavoured to show that in cases of diffuse phlegmon in the right iliac fossa, complicated by adhesions and fistulæ, the operation of enterectomy, always serious and not seldom fatal, might be avoided by an operation which detached the involved segment from the intestinal current. The bowel, relieved of the constant irritation aroused by the passage of fæces, would then tend to heal and the patient would be thereby restored to health. A series of experiments performed upon animals demonstrated the possibility of the successful performance of the operation. Salzer himself, however, did not perform the operation in man. Terrier and Gosset[5] consider that exclusion of the intestine is indicated in all cases where there is a mechanical obstruction to the onward passage of the intestinal contents. The opinion, however, is not borne out by practical experience, for it is well known that in certain instances a lateral anastomosis is attended by most satisfactory results.

Exclusion of the intestine has been practised for the following conditions. Tuberculous or simple ulcers of the intestine which have led to the formation of external fistulæ, the purpose of the operation being the diverting the fæcal

[2] Delore and Patel: Revue de Chirurgie, 1902, pp. 669 and 797.
[3] Hartmann: Gazette des Hôpitaux, Oct. 3rd, 1903, p. 1125.
[4] Lance: Thèse de Paris, 1903, No. 348 (contains a list of all recorded cases).
[5] Terrier and Gosset: Revue de Chirurgie, 1901, vol. xxii., p. 79.

current and the giving rest to the diseased portion of the bowel. In intestino-vaginal fistula following hysterectomy a bilateral exclusion is performed and the sequestrated loop drains into the vagina. The discharge soon lessens and within a few weeks becomes almost imperceptible. In cases of cholecystenterostomy; the gall-bladder is joined to the portion of bowel cut off by unilateral exclusion. In chronic invagination; the operation has been performed on three occasions. In cases of artificial anus and fæcal fistula; in these conditions other operations are always to be preferred. In cases of colitis an entero-anastomosis or a unilateral exclusion, the ileum being joined to the sigmoid flexure, has been performed with marked relief to the inflamed and perhaps ulcerated bowel. In chronic intractable constipation unilateral exclusion has been performed; the ileum has been divided about one foot above the ileo-cæcal valve and the proximal end implanted into the sigmoid flexure or the upper end of the rectum.

The operation of exclusion of the intestine is chiefly necessary in cases of chronic inflammatory disease, probably tuberculous, involving the bowel and leading to external fistulæ; in cases of inoperable carcinoma of any part of the large intestine, especially of the cæcum and ascending colon; and in rebellious cases of muco-membranous colitis. From what has been said it will be recognised that unilateral exclusion, save in cases of disease affecting the lower end of the ileum, offers no advantages over lateral anastomosis, and that bilateral exclusion affords the best means of dealing with certain diseases, chiefly tuberculous and malignant, in the cæcum and colon, and with fistulæ between the small intestine and the bladder or vagina.

For the drawings which illustrate this paper I am indebted to Miss Ethel Wright.

Leeds.

SIX CASES OF SPLENIC ANÆMIA IN ONE FAMILY.

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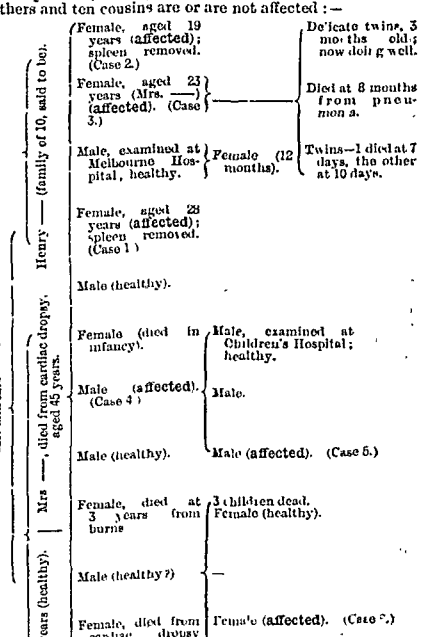
With Remarks on Two Cases in which Splenectomy was performed, by R. A. STIRLING, M.D. Melb., *Surgeon to the Melbourne Hospital.*

MODERN medicine is increasingly concerning itself with conditions of the blood. We find bound up therein the great questions of heredity, vulnerability, and immunity. We use the blood for serum diagnosis and treatment; we make from it leucocyte counts before operations; we think of it as fed from the gastro-intestine, perfected by internal secretions, purified by the excretory organs, and undergoing in the capillaries all the anabolic and katabolic metabolisms that accompany functional activity, growth and decay. We find [illegible] response [illegible] in some [illegible] radually, too, we are coming to underst[illegible] different parts, its alkalinity, its [illegible] tion. Already we have reason to [illegible] are the carriers of oxygen and proteid; that normoblasts make for blood regeneration and microblasts and megaloblasts for blood degeneration; that the polynuclear cells are phagocytes; that the myelocytes are marrow cells and the lymphocytes the products of the adenoid tissues, though we can still only guess at the functions of the eosinophiles, basophiles, mast cells, and blood plaques. We are thus clinically interested in leucocytosis, lymphocytosis, leucopenia, eosinophilia, oligocythæmia, polycythæmia, polychromatophilia, and the great divisions of anæmia, primary and secondary.

Of all forms of anæmia, those connected with splenic enlargement are amongst the most interesting. The function of the spleen is still an unsettled matter. According to Wolff it contains indifferent cells, which normally produce non-granular leucocytes, though if the function of the bone marrow be upset then it can produce granular leucocytes and even erythrocytes. Clinically, we find an enlarged spleen present in leukæmia and Hodgkin's disease and in anæmias due to gastro-intestinal infection, rickets, syphilis, malaria, hepatic cirrhosis, malignant amyloid and hydatid disease. But there are special forms of obscure origin, known as splenic anæmia, found in infants as well as in adults. (*a*) The splenic anæmia of infants is well described by Hutchison in the late Goulstonian lectures.[1] The patient is usually from six to 24 months old and mildly rickety. The liver is enlarged as well as the spleen; there is no great tendency to hæmorrhage; the blood picture is that of a severe anæmia, with a marked polymorphism, some leucocytosis, some myelocytes, and a marked increase in mast cells. The cases are of short duration, recovery is frequent, and death, if it occur, is due generally to bronchopneumonia. The pathology is not peculiar—simply a chronic splenitis, affecting chiefly the pulp. Hutchison considers the cause not rickets or syphilis but toxic infection from the intestinal flora. (*b*) Quite different is the splenic anæmia of adults (though Hutchison considers that this variety also occurs at times in children after second dentition—i.e., when the blood has assumed adult characters). The anæmia is profound and attended with hæmorrhages, gastro-intestinal disturbances, icterus, and pyrexial attacks. The splenic enlargement is uniform, very marked, and painful. The blood picture is a leucopenia, with an anæmia of the pernicious type in advanced cases, and relative lymphocytosis (a full diagnostic table will be found in Da Costa's "Hæmatology," p. 234).

In leukæmia, on the contrary, there are leucocytosis and the myelocytic type of blood; and in Hodgkin's disease, though the blood picture may be identical, the spleen is much smaller and the lymphatic glands are enlarged. In syphilis there are, in addition to the recognised clinical signs, an even more marked oligocythæmia, a very low colour index, and a noticeable leucocytosis of the lymphocyte type. The series which I am now recording is apparently unique. It contains three sisters and one brother, with his son and niece. The family tree is appended. It has been impossible, so far, to determine whether the other two brothers and ten cousins are or are not affected:—



[1] THE LANCET, May 14th, 1904, p. 1223

There is no family history of congenital syphilis or of syphilis having been acquired in any of the cases, except perhaps one. All the family were born at Portarlington, came to South Melbourne in 1885, and have ever since lived there or in Brunswick.

CASE 1.—This patient, who was a female aged 28 years, first came under notice in May, 1903. She had typhoid fever in 1884 at eight years, measles slightly at 13 years, and bilious attacks with vertigo till 15 years; she was at home working hard till 16 years. The catamenia occurred at 21 years and were regular till January, 1903. She was strong till 1885, when she severely scalded her left foot; pallor was first noticed in 1888. In 1890 she had a second attack of typhoid fever, mild, with good recovery. In 1895 she was for two months in the Homœopathic Hospital with anæmia and traumatic ulceration of both inner malleoli. In 1900 she was for six months in St. Arnaud Hospital with the same; her spleen was then found to be enlarged and she had ulcers which were considered to be probably specific and which healed under rest and specific treatment; arsenic did her general state little good; the ulcers had been discharging off and on ever since on any long standing. In April, 1901, she was for four months in Ward 11 of the Melbourne Hospital; her spleen was then down to the umbilicus and there was marked hæmic bruit. The blood contained per cubic millimetre 2,800,000 to 3,130,000 red cells with no marked changes in shape; 5200 white cells; and hæmoglobin, 53 per cent. Three weeks later she was for nine months in Ward 4. Both she and her sister (Case 2) were then given mercury and large doses of iodide in view of a possible specific origin without any benefit. Iron had no effect, but arsenic in increasing doses, and hypodermic injections of sodium cacodylate in large doses were at first beneficial but without lasting effect; attacks of splenic pain with pyrexia occurred; the patient was finally discharged on May 23rd, 1902, somewhat improved by hospital feeding and *régime*, but apparently little influenced by any drug. From June, 1902, to March, 1903, she was again in St. Arnaud Hospital. On admission into Ward 12 in May, 1903, she was markedly anæmic with an anxious chlorotic expression; she had pain, dull and paroxysmal, over the spleen, the liver, and the kidneys; there was a hæmic bruit; the spleen extended down below the umbilicus and inwards to the middle line; the liver was slightly enlarged; there were attacks of vomiting for eight or nine days, with bile and blood; there was a dull, livid, chronically congested area over each internal malleolus, necrosed to the bone and discharging. She gave a history of anorexia for six years, palpitations and chlorotic tinge for four years, and dyspnœa for three years. She had had epistaxis twice, several feverish attacks with temperature up to 100° F., and diarrhœa and dysuria at times. There was no purpura. She was fairly nourished and presented no signs of hereditary syphilis. Despite stimulating diet, bone marrow, adrenalin, arsenic, hæmatogen, and ferric chloride in large doses she gradually grew worse, periods of feeling well alternating with depression and malaise. I am indebted to our pathologist, Dr. Mollison, for the following and all other blood examinations made in the Melbourne Hospital:—

Date.	Red cells.	White cells.	Hæmoglobin.	
April 7th, 1903	2,960,000	No leucocytosis	65 per cent.	Colour index, 1·14.
" 8th, "	Slight micro- poikilo- } cytosis	8000	{ Chiefly polynuclear	No marked micro- megalo- } cytosis.
" 14th, "	3,500,000	—	75 per cent.	—
" 23rd, "	3,500,900	6000	65 "	Colour index, 0·92.

Pallor was slight and there was slight poikilocytosis; there was no polychromatophilia; there was no marked micro- or megalo-cytosis; the white cells were chiefly polynuclear; there were a few lymphocytes, but no myelocytes or baso-

Date.	Red cells.	White cells.	Hæmoglobin.	Colour index.
July 14th, 1903	3,200,000	About normal	55 per cent.	0·86

philes. The red corpuscles then fell to 2,780,000 and the hæmoglobin to 50 per cent. She became weaker and generally worse and went home for a month. Returning on Sept. 3rd, under bone marrow, arsenic, ferric chloride, and thymus extract her red cells rose to 3,600,000 and the hæmoglobin to 65 per cent., falling again on Oct. 15th—the red cells to 2,350,000 and the hæmoglobin to 70 per cent. On the 27th Dr. Stirling successfully removed the spleen though it was very adherent and the bowel became torn. On Nov. 2nd the blood count was: red cells 3,190,000 and hæmoglobin 60 per cent. On the 12th the red cells were 4,600,000. On the 24th she was out of bed. On the 26th the red cells were 4,480,000, with slight leucocytosis, and the hæmoglobin was 70 per cent. On Dec. 3rd the red cells were 4,120,000, the white cells were 10,000, and the hæmoglobin was 85 per cent. On the 16th the red cells were 4,670,000, the white cells were 18,000, and the hæmoglobin was 85 per cent. On the 21st she was discharged, looking and feeling fairly well. On the 29th the red cells were 4,480,000, the white cells were 20,000, and the hæmoglobin was 85 per cent. She has continued ever since free from pain and from the symptoms of severe anæmia, but the malleolar ulcers again broke down and rapidly healed under bromine and rest. On May 19th the red cells were 4,310,000, with some poikilocytosis, and the white cells were 20,000, with an occasional myelocyte and mast cell.

For the examination of the spleen I am indebted to Dr. Constance Ellis. It weighed 43¾ ounces after being in spirit, and cut with a much firmer section than an ordinary spleen. Microscopically the capsule was thickened but not in any remarkable degree. There were few nuclei in the capsule and those present were very much elongated. The spleen tissue just under the capsule was much compressed, there being hardly any blood spaces in it, while there was very much yellowish-brown pigment. The trabeculæ corresponding with the capsule were slightly increased in thickness but not markedly so; they also contained only a few elongated nuclei. Pigment was noticeably present in all parts of the section. The most marked characteristic was the great increase in the fibrillar framework of the spleen pulp, made up of the anastomosing processes of endothelial cells, with their rounded or elongated nuclei. While these cells were numerous, the lymphocytic cells of the spleen pulp were few in number, and this corresponded with another marked change—namely, the paucity of Malpighian bodies which were very few, both in absolute numbers and also in the number of cells they contained; their lymphoid tissue seemed to have been encroached upon by the endothelial framework the large clear cells of which were frequent both in the centres and through the periphery of the tufts. The Malpighian corpuscles gave the impression of having been encroached upon by the fibrosis of the surrounding pulp. The blood-vessels had thick walls, though it was in most instances the adventitia that was increased rather than the intima, though, in some cases, this also had encroached upon the lumen.

CASE 2.—The patient, who was a female, aged 19 years, came under notice on account of visiting her sister. She was admitted to the hospital on May 23rd, 1903. She was anæmic but not chlorotic, with splenic enlargement well marked, but much less than in the case of her sister. She had palpitations, which at times were violent, and vertigo, which at times prevented standing; she became tired on the least exertion. She had a hæmic bruit, splenic pain (which was often very severe and radiating to the axilla and the back), anorexia, frequent nausea, and some diarrhœa lately, but no vomiting or hæmorrhages. She had had three febrile attacks in the last two months. The urine had a specific gravity of 1009 and was neutral; it contained no albumin. She had always been slightly pale and had never been quite strong. She had suffered from congestion of the lungs at six years of age, from typhoid fever at seven years, and for a few weeks from jaundice at eight years. The catamenia commenced at 14 years of age and had been regular but scanty. She had been in service since 13 years of age, in an easy place and good surroundings; she was under no treatment until the time she was in Ward 4 with her sister. She never had any œdema, chlorotic tinge, hæmorrhage, fever, or gastro-intestinal troubles. When in Ward 4 there were some poikilocytosis and normoblasts, but there was no leucocytosis. After her discharge she went back to service for 12 months but since became worse again. Neither she nor her sister has at present any Widal reaction. She was

d on similar treatment to her sister. The condition f the blood was as follows:—

Date.	Red cells.	White cells.	Hæmoglobin.	Colour index.
June 9th, 1903	2,960,000	Leucopenia	67·5 per cent.	1·14
,, 22nd, ,,	3,000,000	—	65·0 ,,	—
July 17th, ,,	2,750,000	—	50·0 ,,	0·
		Slight poikilocytosis, with some microcytes.		

he was discharged on July 30th. She remained much the and was readmitted on Dec. 24th with a view to on. On Jan. 9th, 1904, her blood count was: red 3,700,000; hæmoglobin, 95 per cent.; and white fairly normal. On the 19th Dr. Stirling removed her without any difficulty and she made a rapid recovery. Feb. 3rd her blood count was: red cells, 4,120,000; ite cells, 6000; and hæmoglobin, 80 per cent. On 11th the count was: red cells, 4,600,000; white 8000; and hæmoglobin, 85 per cent. Since the ectomy she has remained free from pain. Neither she her sister has shown any signs of lymphatic enlargement.

For the examination of her spleen I am indebted to Dr. J. Bull. It was uniformly enlarged, measuring 6 inches 4 inches by 2½ inches and weighing 14¾ ounces. The was smooth; the capsule was slightly thickened; was no perisplenitis. The cut surface presented a ly homogeneous appearance and the substance was than normal. There were no lymphoid masses

The most noticeable feature on microscopic examination a marked increase in the fibrillar reticulum of the splenic with diminution of the number of lymphocytes. The follicles were fewer in number than normal and supplying arteries were thick-walled with the lumen ly obliterated. The large amount of coarsely grained pigment indicated considerable hæmolysis. The ely few nuclei in the fibrous trabeculæ and blood-

philis. Staining methods proved the absence of lardaceous nge. The pathology, no less than the clinical history blood pictures of the two cases, is thus in accordance ith that of the condition known as splenic anæmia.

CASE 3.—The patient, who was a female, aged 23 years, was also found similarly affected. She appeared to been quite strong up to her marriage which had place four years previously, except for three mild of "typhoid fever" in 1884, 1890, and 1896. first occurred at Portarlington with six others, the d at South Melbourne with several others, and in the last she alone of the family was affected. In the two attacks she was in the Homœopathic Hospital in all of them she made a good recovery. Her catawere delayed, however, until she was 18 years of ge but she had always been regular. At 21 years of age was jaundiced for a week. She was married at 19 years of ge and had never been quite well since. She had twins that year, both of whom died within a few weeks. In , 1901, Dr. Gertrude Halley treated her for an ulcerated leg which healed under treatment. On June 21st, 1902, she was confined in the Women's Hospital of a healthy child, but remained therein for five weeks owing to sepsis ter adherent placenta. No note occurs as to any anæmia or splenic enlargement. The child became weakly and several months later she herself was an out-patient at the Queen Victoria Hospital in May, 1902, when Dr. Halley reported that she looked very ill and that the ulcer had broken down again. No complaint was made of splenic pain and no examination was made. The baby died at five months from pneumonia. When examined by me last June the spleen reached below the umbilicus and within one inch of the middle line; her general health was unsatisfactory; she was two months pregnant; she was dyspnœic on exertion; she had palpitations and often vertigo on sitting up; she had been chlorotic in tinge since marriage and anæmic for 12 months; she had no hæmic bruit and no history of hæmorrhages or gastro-intestinal disturbances. She was again confined of twins in the Women's Hospital in February last. Dr. J. F. Harris, to whom I am indebted for the account of the patient when in the Women's Hospital, states that the twins were healthy, weighing five pounds each. There was a large common placenta which was adherent and was removed manually, the spleen being felt from within. The placenta, though large and somewhat fibrous, could not be called typically specific. She again ran a septic course and was normal in ten days; she was intensely anæmic and her resisting power against sepsis was exceptionally feeble. So far she has not permitted treatment or examination of the blood.

CASE 4.—The next stage in this interesting series was the discovery of two cases in a nephew and niece of the foregoing and a similar condition in the father of one of them, this latter being a male, aged 30 years. He was strong and well till he had an attack of typhoid fever at Portarlington in 1884, with six others of the family. It was a severe attack, with convalescence lasting three months. The man had been pale and slightly dyspnœic ever since. He had influenza ten years later and was thought to be tuberculous. He gave no hi tory of syncope, vertigo, hæmorrhage, pyrexial attacks, splenic pain, or gastro-intestinal troubles. He had the facies of his sisters; the spleen was notably enlarged. Dr. L. J. Balfour found his blood to contain 2,250,000 red cells and 9000 white cells per cubic millimetre; the hæmoglobin was 65 per cent. Of 66 white corpuscles counted there were 53 polynuclears, or 80 per cent.; ten lymphocytes and mononuclears, or 15 per cent.; and three eosinophiles, or 4·5 per cent. While counting these leucocytes one normoblast was seen. The blood film did not show anything very marked. The chief alterations from the normal were found in the red cells and these alterations appeared in two ways—alterations in size and unequal staining. A few microcytes were present which took the eosin stain more deeply than those of normal size. There was a much greater number, however, larger than the normal size, say varying from the normal (taken at 7·5μ) to about 10μ. The larger forms showed a greater tendency towards the basic stain. Some of the red cells appeared nucleated. The film also showed an occasional normoblast. No basophilic granulations were noticed in the red cells, as were shown clearly in those of the patient's son (Case 5). No poikilocytosis was seen. The blood picture thus, like the others, corresponded very closely with that of splenic anæmia given by Da Costa in his "Hæmatology," p. 234.

(The three sisters and the brother were shown at a meeting of a medical society. The two from whom the spleens had been removed were in marked contrast with the other two, who looked pale, chlorotic, and anxious, just as their sisters had appeared when present at the meeting 12 months before. The two spleens were also exhibited and Dr. Ellis and Dr. Bull showed sections under the microscope, illustrating their descriptions.)

CASES 5 and 6.—For the following account of the condition of the two children I am indebted to Dr. Summons of the Children's Hospital. The first patient, who was a male, seven years old, was admitted to hospital on May 14th, 1904. The child was taken to hospital because of paleness, headache, and attacks of vomiting. When examined he was fairly anæmic, had slight faucitis, vomited two or three times, and had a headache and a temperature of 103° F. The heart apex beat was in the fifth interspace in the nipple line. On auscultation a hæmic murmur was found to be present. The lungs were clear, the liver was slightly enlarged, and the spleen, two fingers' breadth below the costal margin and the notch, was easily palpable. There was no glandular enlargement anywhere. The febrile condition rapidly subsided and on the 16th the boy was well in himself. The mother stated that he not infrequently had similar attacks. The blood count, made by Dr. Balfour, gave 3,600,000 red corpuscles and 14,100 white corpuscles per cubic millimetre and hæmoglobin 40 per cent. The blood smear showed nucleated red corpuscles fairly abundant. The red corpuscles were of various sizes, from well-stained microcytes to megalocytes. The staining of the red corpuscles was interesting. Many of them took up the basic part of the Jenner stain in various degrees as a diffuse blueness or as definite numerous granules. Some of the red corpuscles were vacuolated but the majority of them were normal. The white corpuscles stained well and showed all the usual types as polymorphonuclears, eosinophiles, basic, and lymphocytes; these last were in excess. On the 28th, with no recent febrile reaction, the hæmoglobin was 57 per cent.; there were 2,655,000 red corpuscles and 11,200 white corpuscles per cubic millimetre. The blood smear was similar to the previous ones, except that the nucleated red corpuscles were less numerous. The

boy's colour improved and he was discharged on June 5th, 1904, very much better. The second patient, who was a girl aged ten years, was admitted to hospital on May 24th, 1904, not because she was ill but for observation. She at times suffered from malaise. On examination the skin and mucous membranes were seen to be anæmic-looking. The lungs were clear. The heart apex beat was in the fifth interspace inside the nipple line. There was a systolic murmur very distinct in all areas but most marked at the base. The spleen was easily palpable, four fingers' breadth below the costal margin. The liver was not enlarged. The blood count showed 2,564,000 red cells and 11,860 white cells per cubic millimetre; the hæmoglobin was 55 per cent. The blood smear showed very little diffuse blue staining in the red corpuscles, which were markedly of different sizes, from the well-stained small microcyte to the large megalocyte. Numerous nucleated red blood corpuscles were present. The white corpuscles were of normal types and there was a definite increase in the percentage of lymphocytes. The child, while in hospital, had a severe heart failure and the mother informed us that she had a similar trouble last year. She is still in the hospital. In addition, Dr. Summons has kindly furnished me with an account of another case of splenic anæmia, making the third that has been treated in the Children's Hospital during the last 12 months. As it is apart from the foregoing series, it is subjoined to this paper as an addendum. I have to thank Dr. Balfour, Dr. Bull, Dr. Ellis, Dr. H. H. Fleming (St. Arnaud Hospital), Dr. Halley, Dr. Harris, Dr. Mollison, and Dr. Summons for their invaluable assistance in the directions already referred to.

Such is the strange series of cases which it has been my fortune to observe. It is full of matters of absorbing interest, such as the causation, the identity or otherwise of the conditions in the children and the adults, the occurrence of so many cases in one family, the possibility of its presence in others, the symptoms, course, and endings, the result of splenectomy, and the futility of other treatment. I can deal with these only very briefly.

In obscure causation, clinical history, blood picture, and pathology they are typical illustrations of splenic anæmia and their totality strongly supports the British and American view of considering that condition as a disease *sui generis*. As regards causation I remain entirely in the dark. There is no evidence of hereditary syphilis, rickets, or other known constitutional cause, nor can typhoid fever be accepted as a satisfactory explanation. The same applies to any other certain and sufficient exciting cause. As regards identity all the adult cases have the same clinical history and blood picture, though in varying degrees, and Dr. Balfour's examination of the blood from father and son ends with the statement that "the blood picture of the son is somewhat similar to that of the father, the only difference being that it shows more marked changes." In this category the future development of the infantile cases is a matter of peculiar interest. The different patients, again, have apparently been affected at different ages and one at least seems to date back only a few years. Locality and occupation, similarly, seem to have played no certain part in causation. The futility of the ordinary and even of several extraordinary methods of treating anæmia in such cases is also well evidenced. Again, there is the light that the two cases of splenectomy may and do throw upon the functions of that ill-understood organ—the spleen. Evidently it is not essential to life, to digestion, or to blood development, and some people even do better without it. All this, of course, has been already known but not so markedly exemplified locally and yet any attempt to remove the spleen in the other great blood disease attended with splenic enlargement —viz., splenic leukæmia—seems fraught with the utmost peril and is almost invariably fatal. Apparently this is not from any distinctively splenic function but from different vascular conditions. Finally, the future of the spleenless cases is a matter worthy of continued study. So far, there seems to have been no consecutive lymphatic enlargement and apart from the blood (and even there not distinctively) there has been no evidence of substitutional action on the part of the bone-marrow. The one patent fact is that the patients are both much better in every way without their spleens than they were with them, though they are still vulnerable and not in a state of rude health, and that the proper treatment for such cases is not at present so much medical as surgical.

ADDENDUM.

The following is a further case reported by Dr. Summons from the Children's Hospital.

CASE 7.—This patient, who was a male, aged 14 years, came to the hospital on August 17th, 1903, complaining of weakness, feverish attacks, anorexia, and paleness. There was a history of a continual dull pain in the left side of the abdomen for the past four months. 14 days previously to admission the boy became ill with extreme weakness and pains in the hips and knees, having then had to take to bed. Seven days later he had a profuse epistaxis but not any bleeding from anywhere else; his eyesight was also somewhat dim for a few days. There was no history of a previous attack of scarlet fever. On examination the patient had a pasty, anæmic condition of the skin and mucous membranes, with some puffiness about the face. The lips were brown and dryish, the tongue was flabby and coated, the temperature was 103° F., and the pulse-rate was 160, regular, and of a collapsing character. The patient had also a harsh croupy cough. The lungs, however, were quite clear. The heart's apex beat was in the fifth interspace just inside the nipple line. The sounds were rapid and clear. The liver was slightly enlarged and the spleen was two fingers' breadth below the costal margin and easily palpable. No glands were enlarged in any region. The urinary system was normal. The right pupil was definitely larger than the left; both reacted to light and to accommodation. On examination the fundi oculorum showed numerous old and new hæmorrhages, both large and small. There was deafness in the right ear, no air conduction being present, but bone conduction was good. The blood count was 3,200,000 red corpuscles and 9380 white corpuscles per cubic millimetre; the hæmoglobin was 40 per cent. The smear showed the red corpuscles staining unevenly and of various sizes, from the small microcytes to the large megalocytes. There was slight irregularity in their form. No nucleated red corpuscles were present. The white cells were of the normal types and showed nothing abnormal. The febrile condition rapidly subsided with rest but to the end there were frequent turns of feverishness. As time went on the retinal hæmorrhages altered in shape and transparency and the colour changed to white in the process of fibrosis; numerous small fresh hæmorrhages occurred. The cough, suggestive of enlarged bronchial glands, persisted but no physical signs developed in the chest. The boy was on some days very well and on others he suffered from gastro-intestinal trouble, with vomiting, nausea, and abdominal distress. He gradually became worse and by Sept. 28th he had severe frontal headache and became difficult to rouse. On Oct. 2nd an internal strabismus had developed in the left eye. The right pupil was much larger than the left and the outline was irregular. He did not hear what was said to him and the right side of the frontal region was tender all over. There was tenderness over the calves and great sciatic nerves. The knee-jerks were active and ankle-clonus was obtainable on both sides. The boy was semi-comatose and quickly passed into complete coma, dying during the afternoon of Oct. 5th.

The notes of the post-mortem examination, which was made on Oct. 6th, were as follows. The brain was anæmic, no lesion being present. The heart valves were clear; the left ventricle was hypertrophied. There was a patch of atheroma on the septal cusp of the mitral valve. The lungs showed organised pleuritic exudation at the left apex; no tuberculous disease was present. The heart and lungs weighed 38 ounces; the lungs weighed 20 ounces. The bronchial glands were slightly enlarged but not pressing on the bronchi. There were petechial hæmorrhages under the pleuræ and hæmorrhages under the periosteum of the frontal bone. The spleen weighed 11 ounces. The liver was very tough and weighed two and three-quarter pounds. The pancreas was pliant, tough, and large. Hæmorrhages old and small were seen in the retroperitoneal tissues. The kidneys were large; the capsule peeled easily; it was not tough; the weight of both kidneys was 10 ounces. There was much pigmentation of the omentum and mesentery, due to old small hæmorrhages. There was slight enlargement of the glands in the posterior triangles of the neck and in the axillæ.

REMARKS BY DR. STIRLING ON THE OPERATIONS.

The possible indications for extirpation of the spleen are nine in number, as follows. 1. Cases of malarial spleen. 2. Splenic anæmia or splenic pseudo-leukæmia. Sippy reports seven cases with five recoveries. Osler has reported 15

cases, one of which was operated on with a fatal result Warren (Annals of Surgery 1901) reports a successful case 3 Splenic leukæmia Splenectomy in this disease is almost invariably followed by a fatal result Hagen reports 42 cases with four recoveries Death is due to secondary hæmorrhage owing to the condition of the walls of the large vessels 4 Banti's disease, or hypertrophy of the spleen with cirrhosis of the liver Hagen gives 16 cases with three deaths Banti describes three successful cases 5 Wandering spleen 6 Abscess of the spleen 7 Rupture of the spleen Berger tabulated 80 cases in which the spleen was removed for hæmorrhage, 35 recovered 8 Sarcoma of the spleen 9 Possibly hydatid of the spleen The two cases in question come under the second heading in the list In the first the spleen was markedly adherent, very large, and difficult to manipulate In the second it was smaller and much less adherent Vanverts, quoted by Bovée found that in 39 cases of enlargement with marked adhesions 28 died, while in 35 without adhesions only two died

CASE 1—The operation in this case was performed on Oct 27th, 1903 Under ether an incision ten inches long was made through the left rectus abdominis extending downwards some distance below the umbilicus The structures were divided down to the peritoneum and on opening this the enlarged spleen came into view, the anterior border being fairly moveable but the posterior surface was fixed The inner surface was examined and many adhesions were found around the hilum On passing the hand between it and the diaphragm it was found markedly adherent and below firmly attached to the splenic flexure and descending colon It was decided to attack it on the inner surface first so as to control the blood supply There were at least four large arteries and a large number of smaller ones requiring division but the real trouble lay in dealing with enormous veins A clamp put on the uppermost one slipped and considerable disconcerting bleeding followed Most of this, however, came from the distal end Piece by piece, and working cautiously, the whole gastric surface was separated No ligatures had been as yet applied, the bleeding being controlled by innumerable clamps The posterior border was then divided After dividing the heno renal ligament an attempt was made to free the organ from above and from the colon In this manœuvre a considerable rent was made in the colon, admitting four fingers At this point—one and a half hours after beginning the operation—the anæsthetist Dr E H Embley, informed me that her condition was too hazardous from the hæmorrhage and shock for much further manipulation It was impossible however to discontinue without removing the spleen and repairing the torn bowel Two quarts of normal saline solution being injected into a vein of the arm and a tenth of a grain of strychnine hypodermically she rallied somewhat The few bands holding the spleen were divided and the organ was removed After ligating the vessels securely with silk the bowel, which meantime had been securely clamped by the fingers of my assistant (Dr Cumpston), was now thoroughly cleansed and 24 interrupted sutures of silk were passed through all its coats A tube and gauze drain were placed in position over the injured bowel and the wound was sutured in the usual way The weight of the tumour after removal was seven pounds On leaving the table the patient was in a condition of profound shock and her pulse was hardly perceptible The whole operation took two and a half hours She improved steadily The tube and gauze drain were removed on the fifth day, the bowel sutures holding splendidly On Nov 5th the sutures were removed The blood count showed 4 600 000 red cells per cubic millimetre On the 12th she had a rigor lasting half an hour and vomited several times The temperature was 100 8° and the pulse rate was 108 On the following day she complained of great pain on the right side of the abdomen but there was no distension or rigidity or tenderness at the site of the pain I was told now for the first time that one of the sponges used at the operation was missing, and as it was supposed to have been used on that side of the abdomen and to be the possible cause of rather alarming symptoms—pain, fever, and vomiting—I reopened the abdomen in the right semilunar line and made a search for it Nothing was found The symptoms improved and

terwards

h, 1904

The abdomen was opened by an incision slightly to the left of the middle line, reaching from a little below the costal margin to the level of the umbilicus The stomach intestines, and the left lobe of the liver were packed off with flat sponges and an attempt was made to bring the spleen into the wound This being unsuccessful part of the gastro splenic omentum was ligated and divided The viscus was then turned over and the heno renal ligament severed Copious hæmorrhage here suddenly ensued from rupture of several large veins These were picked up with long pressure forceps and secured The spleen was then brought out of the abdomen and the remainder of the gastro splenic omentum was divided and ligatured No adhesions were found On Jan 28th the sutures were removed On Feb 1st the blood count showed 4 120 000 erythrocytes and 10 000 leucocytes per cubic millimetre and the hæmoglobin was 80 per cent On the 11th the erythrocytes were 4 820 000 and the leucocytes were 8000, the hæmoglobin was 85 per cent

Although I am well aware that the median incision has the stamp of authority in any complicated case—such is the first—an incision to the left of the median line allows, perhaps, of better handling the adhesions of a large tumour It is well, too, I think, to begin below and work upwards having, of course packed off the intestines well to the right I would not if such a case came my way again, depart from the plan of using forcepressure to control the bleeding, as, when the spleen has been removed, it is quite easy to ligate the vessels with much greater security than when working in the cramped area occupied by a large and adherent tumour The veins in spite of every care, are easily torn in the manipulations and the clamps used must be such as are not likely easily to slip Some recommend in this and similar operations to leave a large quantity of saline solution in the abdominal cavity when the abdomen is closed so as to minimise shock, but I have long since discarded it except in cases of ectopic gestation and, of course with the soiling of the wound area by the contents of the colon, such a procedure would only have distributed the colon bacilli—if any were left after thorough sponging

A CASE OF PNEUMOCOCCIC PYÆMIA WITH RECOVERY.

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AND

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"PNEUMONIA is not a local but a universal disease, and the brunt of it may fall upon any part [1] Of the truth of this aphorism all are now convinced The presence of pneumococci in the blood may be regarded as simply an integral part of the infective process [2] Since it is admitted that pneumonia is usually a septicæmia it is not surprising that it occasionally leads to a pyæ
case of pneumococcic infectio
pneumonia empyema, arthritis
in recovery appears worthy of rec
extended knowledge on the e points

A little girl aged eight years, was admitted to the Metropolitan Hospital on Dec 6th, 1903, with the history of having been taken ill two days before admission She was anæmic and looked ill and in pain The respirations were very rapid (60) the pulse was quick (128), and the temperature rose to 102 4°F soon after admission The left lung was dull to percussion in front and impaired behind, in front bronchial breathing and bronchophony and a few crepitations were heard On the right side the note was dull at the base, bronchial breathing and crepitations were heard in patches The heart was apparently normal The abdomen was held rigidly and palpation over the right lumbar region was painful The right knee joint was swollen and tender On the 8th the signs of consolidation on the right side extended all over the front On the left side the signs were clearing up The right knee appeared rather more inflamed By the 11th the

[1] Gee Medical Lectures and Aphorisms p 251
[2] Journal of Infectious Diseases, 1904 vol 1 p 220

pneumococcal lesion. Now that attention has been called to it it will probably be found to occur more frequently than was formerly thought. Thus Raw[19] has met with seven cases following pneumonia—i.e., in about 1 per cent. Dudgeon and Branson[20] have carefully described five cases seen in a short space of time at the East London Hospital, Shadwell. Yet we have only been able to find three cases of arthritis at St. Bartholomew's Hospital during the last ten years proved to be due to the pneumococcus alone. In two cases the knee was attacked, in the third the shoulder and wrist. It usually appears during the height of the primary disease.[21] Despite the grave prognosis the constitutional symptoms are not usually so severe as in streptococcal infections.[22] Generally, it is the synovial membrane that is attacked, though sometimes the suppuration spreads to the peri-articular tissues, as in the present case. The fluid may be thin or creamy pus or almost clear fluid inclosed in a gelatinous membrane. Dudgeon and Branson[23] attach prognostic importance to this, thin pus being an unfavourable sign, whereas encapsulation of the fluid is a good omen. Œdema or brawny induration in the neighbourhood of the affected joint is frequently absent. If the bone is attacked it is generally the outer part near the epiphyseal line that suffers. Pneumococcal osteomyelitis has not as yet been described. The knee is the joint most commonly attacked. Though usually confined to one or two joints the arthritis and osteitis may become wide-spread. Thus in a case recorded by Murray[24] the knee, thigh, ankle, and leg were all attacked.

Vulvitis.—This only appeared after the opening of the abdomen; it must have often happened that the profuse discharge ran down on to the vulva. It yielded to simple antiseptic lotions, so in all probability this was simply an accidental contamination and sprang from no deep-seated cause. But, as has been already pointed out, pneumococcic endometritis may occur and, indeed, all the mucous surfaces have been attacked by this organism[25] In the series of cases here recorded the endometrium was involved once and the Fallopian tubes twice.

In conclusion we have tabulated the 39 fatal cases occurring at St. Bartholomew's Hospital between January, 1894, and August, 1904, of multiple lesions bacteriologically proved to be due to the pneumococcus alone (Table I.). As there is some difference of opinion as to what is sufficient evidence on this point, the pathological report is appended in each case. In calculating the percentages we have added to this table (see Table II.) the case[20] that recovered. Even when all the clinical and post-mortem evidence has been taken into account, it is sometimes difficult to decide which was the primary lesion, and the table only indicates what was the probable course of events.

TABLE II.

Primary Discoverable Lesion.

	Number of cases.	Percentage.
Lobar pneumonia	11	27·5
Broncho-pneumonia	9	22·5
Empyema	8	20·0
Otitis media	4	10·0
Infective endocarditis	3	7·5
Appendicitis, hepatic abscess, meningitis, peritonitis, and pyosalpinx	1 each	2·5

Signs of Metastasis.

Pericarditis	14	35·0
Meningitis	11	27·5
Peritonitis	8	20·0
Empyema	7	17 5
Pleurisy (dry or hæmorrhagic)	6	15·0
Infective endocarditis	4	10·0
Abscess of lung	3	7·5
Thrombosis of lateral sinus	3	7·5
Otitis media	2	5·0
Aneurysm of superior mesenteric artery, arthritis, commencing broncho-pneumonia, endometritis and pyosalpinx, cerebral abscess, acute nephritis, pneumonia, subdural abscess, and superficial abscesses.	1 each	2·5

[19] Raw: Brit. Med. Jour., 1901, vol. ii., p. 1803.
[20] Dudgeon and Branson: THE LANCET, August 1st, 1903, p. 316.
[21] Pusterer: Jahresbericht fur Kinderheilkunde, Band v., Heft 4, S. 417.
[22] Dudgeon and Branson: THE LANCET, August 1st, 1903, p. 316.
[23] Ibid.
[24] Murray: THE LANCET, June 7th, 1902, p. 1604.
[25] Foulerton: THE LANCET, April 12th, 1902, p. 1027. Cary and Lyons: American Journal of the Medical Sciences, vol. cxxii., 1901, p. 298.
[26] Duckworth and Marsh: THE LANCET, Jan. 16th, 1904, p. 159.

NOTES ON A CASE OF QUADRUPLETS.

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CASES of four children at one birth occur with such extreme rarity as to justify the publication of this note. According to Fothergill the ratio is 1 in 387,000.

The patient, aged 36 years, was admitted to the lying-in ward on Sept. 15th, 1904, at 8 P.M. She stated that at 3 o'clock the same afternoon while lifting a heavy saucepan off the fire she felt something "snap" inside her. Soon after a considerable quantity of fluid came from her which she attributed to a temporary loss of control over the bladder. Pains which she described as "slight and lingering" began a few hours after and she left her work and went to the St. Pancras Infirmary.

On admission she gave a history of five and a half months' pregnancy and of having quickened about a month previously. She had noticed herself unusually large but had no pressure symptoms other than a great feeling of heaviness and difficulty in stooping. On examination the abdomen was greatly distended, the upper limit of the uterus being three fingers' breadth below the ensiform cartilage; the fœtal parts were not satisfactorily felt. There was a loud uterine souffle on the right side but no fœtal heart sound could be detected. The os was dilated, the membranes having ruptured, and a fœtal head, soft, as if unossified, was felt towards the right side. The cord, which was prolapsed and pulsating, was easily returned. Pains had now subsided, but as the woman appeared extremely comfortable interference was deemed unnecessary. The patient had a good night and slept well. About 3 A.M. a few slight niggling pains were felt. She was seen again at 9.30 A.M. when the child was found to be presenting transversely in the dorso-anterior position; the hand prolapsed outside the vagina could not be returned. Forceps were applied to the breech and delivery was rapid and easy. The child, a female, measured 13 inches long, weighed 1 pound 4 ounces, and survived 13 hours. Shortly afterwards uterine contractions returned and within the next 20 minutes three other children, two males and one female, were expelled. These were all stillborn and of them the first was a breech presentation, the next a transverse with arm prolapsed, as in the first case of all, and the last a vertex. In length they measured 12¼, 13, and 11½ inches respectively and their weights were 1 pound 10 ounces and 1 pound 4 ounces each of the remaining two. After another 20 minutes the placentæ were delivered, the last one manually. Two were quite separate. The remaining two had coalescing margins with separate chorions to each. There were no complications and the patient made a rapid recovery.

As regards her former history the patient had had five previous pregnancies, none of which were multiple; there had been severe hæmorrhage in two of these. On the mother's side is a complete absence of any constitutional or hereditary tendency; the paternal influence is difficult to obtain.

Remarks.—Cases of multiple pregnancy are notoriously liable to post-partum hæmorrhage, mainly for two reasons—an over-distended uterus favouring inertia and the presence of a large placental site. In this case post-partum hæmorrhage was conspicuous by its absence. This is all the more surprising when one considers the unusually prolonged second stage, coupled with the fact that in previous pregnancies she suffered severely from this complication. The very prolonged delay in the second stage of labour in this instance can readily enough be explained by the over-distension of the uterus, a condition brought about by the two factors present—viz., the plural pregnancy and the considerable amount of hydramnios.

Anomalies of presentation and also premature labour are the rule rather than the exception in multiple pregnancies. The case in point well illustrates both these, for of the presentations two were transverse and one was a breech. As regards the duration of pregnancy, judging by the appearances presented by the infants, it was probably six and a half months, although the mother denied a longer period than five and a half months.

A further point worth noting is the uniovular development of each child, as indicated by the presence of separate

chorions. This is the most common mode of development in the case of twin pregnancies (Galabin), but is unusual in multiple pregnancies involving more than two children

I am indebted to Dr W M Dunlop, the medical superintendent of the infirmary, for his kind permission to publish this case.

St. Pancras Infirmary

SOME CASES FROM PROFESSOR GAUCHER'S CLINIC AT THE HOPITAL ST. LOUIS, PARIS

By J. L BUNCH, M D', D Sc LOND

THE cases from which the following notes were made were seen by me during the first six months of this year and my thanks are due to Professor Gaucher for permission to publish the notes

Diagnosis and treatment of lupus erythematosus of the scalp —The patient, a young girl, had on her scalp some plaques of cicatricial appearance, in one of which were found all the signs of lupus erythematosus, although the largest had lost its characteristic appearance by reason of the treatment which it had undergone and which had caused it to be covered with impetiginous crusts. Diagnosis was necessary between lupus erythematosus and the other diseases which cause cicatricial alopecia of the scalp—traumatic alopecia, favus, and folliculitis decalvans. In favus the cicatrices are deeper and more irregular, at first they are not red, then they take on a whitish tint, and as a rule the cicatrices are large. Folliculitis decalvans causes small round cicatrices surrounded by a bald patch, the cicatrices being more numerous but smaller than those consecutive to favus In the case of lupus erythematosus the lesions may be multiple and although larger than those of folliculitis decalvans they do not attain to the dimensions of those of favus Their centre presents a cicatricial depression and their periphery shows a red scaly border, which is infiltrated and is characteristic of the extending zone of lupus erythematosus One of the patches on this patient's scalp presented all these characteristics

The treatment of lupus erythematosus of the scalp does not differ from that of the affection in other localities Professor Gaucher orders the diseased surface to be bandaged with a mixture of equal parts of tincture of iodine and crystallised acetic acid, which causes a certain amount of inflammation of the diseased area High-frequency currents are also applicable to the treatment of lupus erythematosus of the scalp They are, as a rule, well supported by the patient and do not cause painful or unpleasant sensations, even on the face. One patient in this clinic has, however, been unable to stand high-frequency currents applied to the face, she complained of the pain and in consequence the treatment had to be abandoned But such a case is the exception. In every case it must not be omitted to warn the patient that the disease is one which tends to recur and that future treatment will probably be necessary.

Pityriasis rosea of Gibert abnormally pigmented —It is unusual for pityriasis rosea to leave a very pronounced pigmentation after its elements have disappeared Such an anomaly of the pityriasic eruption may cause confusion and lead to the suspicion of the existence of a syphilide which is fading In the present case each of the elements of the pityriasis had been followed by a dark brown mark and an exact diagnosis could only be made after a very careful [illegible] of any antecedent, of any trace [illegible] mucous lesions led, however, to [illegible] ypothesis of syphilis On the anterior surface of the right thigh we succeeded in discovering a unique medallion characteristic of pityriasis rosea, which made the diagnosis certain On the genital organs the affection had caused the development of a slight amount of eczematisation

Cicatricial acne pilaris of difficult diagnosis —In a girl, aged 23 years, patches of cicatricial lesions were present on the forehead and on the outer surface of the nose and on the chin; they were prominent and presented a slightly keloid appearance The patient stated that they had succeeded some small nodules covered with thin scabs which made their appearance a few months previously and were treated with the galvano cautery. What was actually seen now was the result of this operative treatment and the diagnosis was therefore by no means easy, for the lesions no longer showed any trace of morbid activity

If one inquires what are the lesions of the face usually treated by galvano cauterisation one thinks naturally of lupus, but the rapid evolution of the lesions is not in favour of this diagnosis On the other hand, acne is often treated by this method also and in the case before us the lesions were of this nature In fact, at the edge of the scalp there were some pustular lesions which were those of cicatricial acne pilaris, the "acne necrotica or variolformis," of German authors On the scalp similar lesions were also present.

Professor Gaucher does not approve of the treatment of acne by the galvano cautery. He has seen it from time to time, as in the present case, cause hypertrophied, almost keloid, scars. The pus contained in the acne elements should rather be evacuated by a short scarificator which is [illegible] does not cause [illegible] equently pre- [illegible] substances

A case of melanodermia papillomatosa or acanthosis nigricans.—The patient, a man, aged 51 years, was of Greek nationality As regards his past history, in the year 1873 he lived in Italy and contracted typhoid fever Three months afterwards he had cholera. In 1884 he had hæmoptysis and in 1889 pulmonary congestion Since that time he had had a cough and from time to time spat blood Examination of the skin showed (1) pigmentation of various regions; (2) papillomata, and (3) nævi and senile mollusca The pigmentation on the neck was very marked, distinctly brown in colour, varying from a deep dark tint to a fainter coffee colour near the edges Over the area of pigmentation the folds of the skin were more marked and the intervening sulci were deeper than normal The mammæ were prominent and pigmented The skin of the axillæ was darkish-brown and thickened The dorsal surfaces of the hands were deeply pigmented, the pigmentation extending to a lesser degree on to the posterior surface of the forearm on both sides The skin of the genito anal region showed rugosities, was dark brown, and in places almost black. Papillomata were present on the dorsa of the hands and at the anterior borders of the axillæ. Nævi were found scattered over the pigmented areas, brown, black, or café au lait in colour Palpation of the abdomen showed a definite tumour in the left hypochondriac region, slightly tender on deep pressure, involving probably the posterior surface of the stomach It was considered to be cancerous The subclavicular and inguinal glands were enlarged. The lungs showed definite signs of tuberculosis Not more than 20 cases of this disease are known and the prognosis is bad.

Papular cutaneous tuberculosis —A young man, aged 20 years, presented some scabbed papular lesions on the knees and posterior surface of the forearms The lesions were those of a papular tuberculosis of the skin, non bacillary cutaneous tuberculosis, which some authors describe under the name of [illegible] by reason of its [illegible] be considered as [illegible] the diagnosis was easy, for the patient was suffering from tuberculous glands of the neck, and hence the nature of the cutaneous affection could be deduced The lungs, however, showed no signs of tuberculosis The diagnosis would be infinitely more difficult if no glandular, visceral, or bone lesions of tuberculosis were present The lesions therefore present some resemblance to lichen but they are dissimilar in that the centres of the papules show a cicatricial depression which is not seen in lichen Moreover, each is covered with a scab and when this falls off an indelible scar remains

Chronic prurigo of late development —The lesions of chronic prurigo were here seen in the usual distribution in a girl, aged 17 years But although the distribution was not abnormal the case is peculiar in that the first manifestations of the disease showed themselves only a year ago when the girl was 16 years old As a rule, prurigo commences very much earlier in life and is usually a disease of infancy Cases such as this when the first signs show themselves after adolescence are distinctly rare but they do occur. Treatment consists in the use of cod liver oil internally and externally and the patient will be treated with inunctions of cod liver oil and she will have to take several spoonfuls a day In cases where there is much lichenification and

thickened patches are present on the skin cod-liver oil is not sufficient alone and oil of cade must be prescribed. In spite, however, of treatment, be it what it may, the disease is one which tends to recur and the prognosis is not always very favourable.

Ulcerating tuberculous lupus of doubtful nature.—The patient was a woman, aged 60 years, and the lesion made its appearance at the end of the nose a year ago. A nodule of apparently tuberculous nature made its appearance and broke down, leaving an irregular ulcer which did not present specific characters. Nevertheless, she was treated with injections of benzoate of mercury and went away in July apparently cured. In November, in spite of continual treatment the lesions reappeared and now the ulceration, indurated, of the size of a florin at the end of the nose covered with a crust and surrounded by an inflammatory zone, presented exactly the appearance of lupus. She will, however, be again given a three weeks' course of benzoate of mercury injections and it is possible that the lesions may again disappear under this treatment. But so far, in spite of the previous curative effect of mercury, the appearance of the lesions makes it strongly probable that they are lupus.

Favus in a nurse at the hospital of the Enfants Assistes.—The case differs from one shown recently where the scalp was covered with scabs and impetiginous crusts of indefinite origin, where no scutella were present, and when the diagnosis could only be made microscopically, in that the lesions are here well marked and definite. But the case is peculiar in that the patient said that she had only had the disease one year and one would have thought that a nurse at this hospital would have had some experience of the affection. The scars, however, showed that the disease must have commenced very much longer ago, probably in her infancy. The scalp is now practically denuded of hair on the left side and there is a large fungating lesion in the left parietal region. It is excessively rare to observe a case of favus in a person born in Paris who has never left the city. Nearly all the cases which one has the opportunity of studying in Paris come either from the provinces or from abroad.

Two cases of skin disease, apparently eczema.—The first was that of a man, aged about 45 years, who was cured at this hospital last year by oil of cade ointment of eczematous lesions of the trunk. Now he had come back with what turned out to be *érythème prémycosique*. On the legs, thighs, and to a lesser degree on the trunk were scattered and also closely approximated lesions which were indurated but not vesicular or discharging. The pruritus was intense and the glands of the groin were enlarged which is unusual in eczema unless it becomes infected. Both the thighs were symmetrically involved as high as an inch above Poupart's ligament where there was a definite limiting line. The prognosis is, of course, very bad and unless treatment with high-frequency currents is more successful in his case than in some others there is every reason to think that the case will shortly resolve itself into one of definite mycosis fungoides.

The second case was that of a man with eczematous lesions of much the same distribution, but in spite of the itching, the inflammation, induration, and general resemblance to the last case there can be no doubt that we were here dealing with a pure case of eczema.

Effet précoce of syphilis.—The patient, a man, aged 49 years, was treated less than a year ago for chancre. Mercury was given him in the form of pills. Now he had for some weeks had symptoms of myelitis and paraplegia, with greatly increased knee-jerks, tremor, and ankle clonus. He will be put upon benzoate of mercury injections and the mercury will be pushed. But it is necessary to remember that if the dose exceeds three and a half centigrammes a day stomatitis is always produced unless sulphur water is administered at the same time. Such an administration of sulphur water, procured preferably from a natural spring, has a wonderful effect in counteracting the poisonous effects of mercury and permitting the administration of much larger doses of mercury than could otherwise be given with safety. The exact method in which the sulphur acts is not certain. Whether it combines directly or indirectly with the mercury in the organism or leads to the formation of a harmless albuminate of mercury, the result seems to be that a considerable portion of the mercury after performing its curative work is excreted in a non-toxic form and the organism is able to stand the ingestion of much larger doses of mercury than would otherwise be possible without the appearance of toxic symptoms.

Possible confusion between boils and syphilitic gummata.—The patient, a woman, aged 50 years, had multiple boils on the upper part of her back and it is interesting to note that these boils were at first taken to be gummata having regard to the pseudo-syphilitic aspect of the lesions of circinate seborrhœic eczema which the patient had at the same time on her neck. But basing his opinion upon the rapid march and on certain characters of their symptomatology Professor Gaucher rejected this diagnosis and only prescribed a local treatment which led to their cure. The patient, it may be mentioned, presented no sign of syphilis. For comparison, here is a man who has been syphilitic for the last 16 years and who also has some boils. If on the strength of his past history one would be inclined to think of syphilitic gummata the aspect of the lesions would soon shatter this hypothesis.

What is the preventive treatment of furunculosis and by what means can we prevent its attacks? Innumerable remedies have been brought forward with this object. Yeast was much employed some years ago, but its success was apparently inconstant, for it is much less talked of at the present moment. Patients suffering from boils were recommended by Hardy to take at each meal a teaspoonful of creasote in half a glass of Vichy water and to continue this treatment perseveringly for a long time, with the idea that boils developed in patients with an arthritic diathesis. Professor Gaucher has seen excellent results from this treatment, but he prescribes at the same time an internal antiseptic—boric acid. Six grains are given at each meal, well diluted, and dissolved in the liquid which the patient takes with his meal. When given thus it causes no gastric pain. Finally, these patients often improve under treatment with arsenic. These various methods can be combined. Thus, for one week Hardy's treatment may be prescribed, then for a week solution of boric acid, and then a week of arsenate of soda. Although this treatment has no pretensions to be a panacea for furunculosis, it sometimes gives most successful results.

Tertiary papulo-squamous syphilide in a man, aged 62 years.—The patient had a chancre when 20 years of age. During 35 years the syphilis remained latent, then some tertiary lesions appeared, and now there is an irregular circinate indurated patch on the back measuring about ten by six inches, the edge of which is raised and the centre is clearing. The case is interesting in that a short mercury treatment administered when the chancre appeared gave an immunity of 35 years, while a thorough treatment given six years ago, when the first tertiary lesion showed itself, only cured that lesion but did not prevent the appearance of fresh tertiary lesions. Mercury must always be given in sufficient doses early when the toxins are still active in order to produce definite and lasting curative effects.

Coexistent sarcoma and iodide eruption.—The patient had an undoubted sarcoma of the neck and in addition a single localised raised vegetating lesion of the left hand of about the size of a five-shilling piece. The lesion had a purplish border with surrounding infiltration, the edge was slightly raised and the floor was irregular and secreting a yellowish fluid. There were no similar lesions elsewhere. The lesion on the hand was similar to one reproduced in a cast in the museum of an iodide eruption, and it turned out that this patient had been taking iodide of potassium for the sarcoma on his neck, and the iodide had produced this lesion on his hand in addition to other toxic symptoms. He will, of course, be given no more iodide and we may promise him a speedy cure of the trouble to the hand.

London, W.

TREATMENT OF ALCOHOLISM IN MOSCOW.—The Moscow government has decided to remove the alcoholic cases from all the town infirmaries and to gather them into a special department near the Hospital of Psychiatry.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The following entrance scholarships have been awarded:—The Epsom scholarship (100 guineas) to L. H. Taylor; the Livingstone scholarship (100 guineas) to C. J. Fox; the Huxley scholarship (55 guineas) to H. F. L. Hugo; and Universities scholarships (each 72 guineas) to C. Beards and T. W. Wade. Entrance scholarships have also been awarded to L. M. Webber (60 guineas), to E. S. Calthorp (40 guineas), to R. G. Dainty (30 guineas), and a Universities exhibition (36 guineas) to J. J. S. Rowe.

Reviews and Notices of Books.

Serums, Vaccines, and Toxines in Treatment and Diagnosis. By W. CECIL BOSANQUET, M.A., M.D. Oxon., F.R.C.P. Lond., Physician to Out-patients, Victoria Hospital for Children; Assistant Physician (late Pathologist) to Charing Cross Hospital; formerly Fellow of New College, Oxford. With 8 Figures in the text. London, Paris, New York, and Melbourne: Cassell and Co. 1904. 12mo, pp. 344. Price 7s. 6d.

WHILST many text-books, more or less voluminous, on serum therapy have already appeared in the German tongue the book under notice is, we believe, but the second that has been published in England specifically dealing with the subject. Nor perhaps is the reason far to seek, for serum therapy is still in its infancy, dating back no further than 1890, when the *Deutsche medicinische Wochenschrift* published a joint paper by Behring and Kitasato announcing the discovery that animals infected with virulent diphtheria bacilli could be saved by the subsequent injection of serum obtained from animals immunised to that organism. The employment of antiserum in the treatment of diphtheria was at once taken up with the result that the value of the method was speedily recognised. Moreover, the success of the treatment in this particular disease at once raised the hope that similar methods would prove equally efficacious when extended to many, if not all, the bacterial infections. Now, after a practical test extending over some ten years of serum therapy as applied to many diseases a careful perusal of Dr. Bosanquet's manual will show to what extent that hope has been realised.

In a manual such as the present, addressed primarily to the professional man in active practice, the author has properly recognised the obstacles which prevent the bulk of his readers from familiarising themselves with the many and various phases of research work on immunity and kindred subjects. He has therefore devoted his earlier chapters to a discussion of those elementary principles and theories a correct appreciation of which is so essential to the intelligent application of serum treatment. A short historical retrospect serves to introduce the subject of artificial immunisation and to explain the nature of infection and the theories of the pathogenic action of micro-organisms; and in the following chapter Dr. Bosanquet gives a coherent and consecutive account of the facts elicited by recent work—facts which provide the basis for our present-day conception of immunity, and in this section matters are considerably simplified by tabulating the various synonyms of "immune body" and "complement" respectively. Hæmolysis (illustrated by a few striking diagrams), cytolysis, and agglutination are all considered in turn and lead up to a clear exposition of Ehrlich's side-chain theory of immunity. And here we cannot but admire the wise discrimination exercised—clear evidence of the practical teacher—in selecting the experimental work necessary to illustrate the theories; nothing irrelevant to the main issue is admitted, and very little that is pertinent to the subject is missing from its proper place. Indeed, the only point of real importance which is not dealt with is the rôle of phagocyte viewed in the light of Dr A. E. Wright's work upon "opsonins"—work too recent, no doubt, to be incorporated in the present volume. The preparation and standardisation of antisera and of vaccines in general are described without entering upon details and minutiæ necessary only to the laboratory worker; then follows the usual technique of administration.

The agglutination test and the utilisation of toxins in diagnosis, although clearly set out, are dismissed in a few pages. In connexion with the former as applied to the diagnosis of enteric fever, we are glad to note that the author insists on both a time limit (half an hour) and a dilution (1 in 50), for undoubtedly much of the criticism directed in the past against this test has arisen from neglect of essential points such as these by inexpert workers. Then commences the description of specific antisera arranged under the headings of the various diseases in which they are employed, the arrangement of the matter being fairly uniform in the succeeding chapters. First the causation of the disease is briefly noted, next the method of preparation and standardisation of the appropriate antidote is outlined, and then the evidence for or against its use is impartially discussed, followed by the dosage and method of administration and notes on the serum diagnosis. Each chapter or section concludes with a few succinct paragraphs in which the author's opinions are stated with a dogmatism which, after all, is absolutely necessary in a book of this character. Footnotes, too, are appended to most of the sections specifying the makers of the various sera, the price charged, and the strength.

Diphtheria, which holds the premier place, is utilised to exemplify the subject of the interaction of toxin and antitoxin as affecting the dosage of antitoxin serum. The tabulated returns from hospitals under the Metropolitan Asylums Board, as well as from American sources, bear convincing testimony of the efficacy of diphtheria antitoxin and fully justify the author's conclusions. Tetanus is dealt with next, but although a typical toxæmia and caused by an organism which elaborates *in vitro* a toxin even more powerful than that of the diphtheria bacillus, the results of treatment with antiserum are far less successful and the instructions as to dose and site of injection lack the force of those referring to diphtheria. The nature and action of snake venoms are carefully explained and although the reader is enjoined to use Calmette's antivenene promptly in *all* cases of snake bite the value of this remedy in poisoning by the cobra is alone insisted upon. Small-pox and vaccinia come next and in discussing the causal agent the recent researches of Councilman receive due recognition. The value of, and necessity for, vaccination and revaccination are well brought out by reference to published statistics, together with other points, such as the varying degrees of protection afforded as judged by the number of insertions and different sizes of scars. In speaking of glycerinated lymph Dr. Bosanquet remarks, "but few, if any, specimens of lymph are germ free." Both the ordinary and the intensive treatments of hydrophobia are well described and the statistics quoted from the Pasteur Institutes of Paris, New York, and Kasauli are sufficiently convincing for all but the most captious critics.

From this point onwards, however, disappointment awaits the reader who expects to find antisera for other infections as well vouched for as those already dealt with. Thus for septicæmias, such as plague, enterica and cholera—also for tuberculosis—one observer advocates a bactericidal serum and another a vaccine, but, truth to tell, although in some cases a serum or a vaccine has sometimes given promising results each and every preparation when weighed in the balance has been found wanting. Biological research will no doubt in time evolve successful antidotes for all bacterial infections but that time is not yet, and of this the author is well aware, consequently in his conclusions we are frequently confronted by some such statement as: "Sufficient evidence is not yet available to enable us to decide as to the efficacy of" such and such a remedy, and so on. Space is insufficient to deal with the contents of this work seriatim, suffice it to say that diseases other than those of known bacterial origin are also discussed—cancer and its serum treatment (also treatment by Coley's fluid), Graves's disease, epilepsy, hay fever, and epizootic diseases. A few pages, too, are devoted to artificial sera—Trunecek's serum, and the like. The author is to be congratulated on the

clear and graphic account which he has provided of the work that has already been carried out and is now being attempted in the domain of serum therapeutics. Further, by an impartial statement of evidence Dr. Bosanquet has provided the general practitioner with a guide which will enable him to weigh the evidence and to decide for himself what prospect or hope is afforded by the employment of a particular serum or vaccine in his own treatment of disease.

A Manual and Atlas of Medical Ophthalmoscopy. By Sir WILLIAM R. GOWERS, M.D., F.R.C.P. Lond., F.R.S. Fourth edition. Edited by the Author and MARCUS GUNN, M.B. Edin., F.R.C.S. Eng. London: J. and A. Churchill. 1904. 8vo, pp. 318. Price 14s. net.

Sir William Gowers's work has been for a quarter of a century the standard book of reference both for the physician and for the ophthalmic surgeon, as indicating the relations between general affections of the system and the appearances presented by the eye when examined with the ophthalmoscope. When the first edition appeared it stood almost alone and its value was fully appreciated by all practitioners. The employment of the ophthalmoscope, instead of being practised, as was then the case, by a few, is now common to many physicians and the labours of the members of the ophthalmological societies at home and abroad have combined to accumulate a large mass of facts which have proved of great value in the diagnosis, forecast, and treatment of disease. The material at his disposal has at length proved too much for Sir William Gowers to deal with single-handed and he has therefore secured the services of an able surgeon, Mr. Gunn, who has had very large experience in the out-patient room and wards of the Royal London Ophthalmic Hospital, to assist him in selecting and arranging the results of recent inquiry in accordance with the general plan of the work. In this he has acted wisely and well, for the outcome is that the work is a most useful and trustworthy guide both to the physician and to the ophthalmic surgeon.

The opening chapter presupposes on the part of the reader some familiarity with the use of the ophthalmoscope and is occupied with a description of the fundus and particularly of the vessels in regard to the relative size of the arteries and veins, their course and the structural changes in them and in the circulation visible to the naked eye. Such phenomena as the pulsation of the retinal arteries and veins, once thought to be extremely serious, are discussed, and whilst shown to be almost constant in aortic regurgitation they occur, it is pointed out, normally in rare instances in the retinal arteries and frequently in the case of the veins as they traverse the disc, having been observed by Mr. Lang and Mr. Barrett in three-fourths of their hospital patients. The different views of the causation of the pulsation in the retinal veins expressed by Coccius, v. Carion, Donders, Jacobi, and Helfreich are given; the true explanation in the author's opinion is that owing to close approximation of the retinal artery and vein at the scleral ring the arterial distension compresses the vein and causes a temporary obstruction to the return of the blood. The ophthalmoscopic appearances presented by the normal optic disc and of the disc under pathological conditions are given in great detail and with much precision. To write such a chapter as that on neuritis of the optic nerve innumerable and most careful observations, both by the direct and indirect methods of observation, must have been made, a still larger number of notes taken, infinite time and labour spent on the illustrations which Sir William Gowers tells us were all done with his own hands, and much thought and consideration expended in blending the scattered observations contained in transactions, reports, and journals into a connected whole which may be read with pleasure as well as profit by the general physician and by the expert. At first sight the illustrations, which are in sepia, do not appear to be well adapted to reproduce the appearances in the fundus seen with the ophthalmoscope, but a more attentive examination of them shows that the minutest detail of the size, position, and course of the vessels and of the shades of even the slightest effusions can be represented with extreme delicacy and accuracy.

The second part of Sir William Gowers's treatise is devoted to an account of the ophthalmoscopic changes that may be observed in special diseases, such changes as appear, for example, in diseases of the membranes and the substance of the brain and spinal cord, in fevers, in diseases of the heart, kidneys, and lungs, and in other conditions. The appearances presented in degeneration, and in particular in tabes dorsalis and locomotor ataxy, will be studied with much interest on account of the large experience of the author. He finds that in the last 400 cases which he has seen, atrophy of the optic nerve, which is usually bilateral, only existed in 26, or in 6·5 per cent. In idiopathic epilepsy the appearance of the fundus oculi between the paroxysms is, as a rule, normal. He has examined very carefully several thousand epileptics and has found in most cases every feature of the fundus to be such as may be observed in persons not epileptic; during the attack the veins enlarge and become darker but no change is observable in the retinal artery. Sir William Gowers, without denying the occurrence of visible changes in the fundus as the result of railway accidents which are so often the subject of litigation, is evidently suspicious of them, believing that "the pathological nature of many of the appearances described in these cases has been the result of an affection of the mind of the observer rather than of the eye observed." We can give this work no higher praise than to say that it belongs to that class of books which Lord Bacon pointed out as worthy to be chewed and digested, and there are few readers who will not derive much profit from its perusal.

LIBRARY TABLE.

Practical Chemistry. By P. A. ELLIS RICHARDS, F.I.C. London: Baillière, Tindall, and Cox. 1904. Pp. 136. Price 3s.—Mr. Richards's teaching experience with medical students amply qualifies him to write a practical handbook suitable to their needs in regard to a course of chemistry. In the book before us he has kept within the limits of the requirements of the preliminary science examination of the Conjoint Board of the Royal Colleges of Physicians and Surgeons and the preliminary scientific examination of the University of London. An undoubtedly valuable feature of the work is a section on elementary practical toxicology and we think a chapter might have been added with advantage on some of the simple methods used in the analysis of urine. The author has evidently taken great care in reading the proof sheets, for in spite of the number of equations given and formulæ represented we have not found any error. On p. 26 it is stated that acids do not aid in dissolving calcium sulphate, a statement which is not strictly correct according to Fresenius, while on the same page the same may be said of the statement that powdered antimony is insoluble in HCl. As a matter of fact, metallic antimony is appreciably soluble in distilled water. It is stated on p. 65 in a footnote that certain carbonates—e.g., calcium and magnesium—are soluble in water containing carbon dioxide. We are under the impression that all the carbonates are more or less soluble in water saturated with carbonic acid gas. These are, however, comparatively unimportant points which in no way affect the general accuracy of the book. The chapters on preparations and volumetric analysis are well done and should be very helpful to the student. They are evidently

based on the practical experience of the author, this part of the course, we think, is very important in its instructive aspect and we are glad to find that Mr Richards has given undoubted care to it Altogether the book is an admirable introduction to elementary qualitative and quantitative analysis and is sure to be appreciated by the general student and by the medical student in particular

Health and Disease in Relation to Marriage and the Married State Edited by Geheimer Medizinalrath Professor Dr H SENATOR and Dr Med S KAMINER The only authorised translation from the German into the English language by J DULBERG, M D Wurzburg, of Manchester London and New York Rebman, Limited Vol I Pp 498 Price for two vols, 20s net (cloth), 35s net (half leather) —In his introductory chapter Professor Senator reminds us that while the laws as to marriage and succession have been drawn up by all civilised states with the utmost care and regard to the minutest details, on the other hand the question of the somatic condition in reference to marriage and the marriage contract has hitherto been little thought of The effect which the physical state of husband and wife has upon each other or their union, the influence which marriage has upon the life and the health of the married couple and their descendants or even on the welfare of whole families and communities,—these questions have as yet received outside medical circles, and particularly at the hands of legislatures, either no recognition at all or not as much as is demanded by our present knowledge and views The author writes "Marriage can be, on the one hand, a source of disease or the aggravating cause of pre existent diseases, *vice versa*, diseases or physical defects can have a disturbing and detrimental influence upon marriage, and it is, finally, possible for marriage to consummate the cure or alleviation of conditions of ill health" In this book an attempt is made to collect all the questions concerning health and disease in connection with marriage into a comprehensible *ensemble* that shall serve to the medical man as a source of information and as a guide to his conduct The work may be accepted as a help and a counsellor to the practitioner by informing him of the extent to which medical interference is possible Dr Dulberg has endeavoured to give a faithful version of the German text In the first volume, which is now before us, the author treats of the following subjects in 12 chapters—the hygiene of marriage, inherited and congenital disease and predispositions to disease, consanguinity and marriage, the influence of climate, race, and nationality on marriage, sexual hygiene, menstruation, pregnancy, child bed, and lactation, constitutional diseases, diseases of the blood, disease of the vascular system, diseases of the respiratory and digestive organs, and renal diseases In the chapter on consanguinity in marriage the practitioner is advised to discourage the marriage of blood relations "For according to the laws of heredity the possibility is not precluded that two similar predispositions which on account of their slight intensity were not recognisable in the parents individually may combine in the offspring and become so pronounced as to assume a definite pathological character, and this is, moreover especially likely to be the case in consanguineous marriages" The chapter on sexual hygiene in married life treats fully many most delicate questions The medical man will find in the work much information that will be useful to him The recommendations as to advice to be given to patients are sound

Beri-Beri its Symptoms and Symptomatic Treatment An essay printed by the Board of Trinity College Dublin, for the author By PERCY NETTERVILLE GERRARD M D Dub London J & A Churchill 1904 Pp 95 Price 2s 6d net —Dr Netterville is a district surgeon in the Federated Malay States Civil Service In this essay he first classifies cases of beri beri into (1) the œdematous or wet cases, (2) the mixed, (3) the dry or atrophic cases, (4) the rudimentary, (5) the fulminating or acute pernicious cases of Scheube, and (6) the spasmodic He then devotes 26 pages to the treatment, which he says should be purely expectant, symptoms being dealt with promptly as they arise He discusses the etiology and briefly considers 14 theories which have been advanced by various writers He takes exception to the word 'dormant' in Dr Hamilton Wright's theory and expresses a doubt as to whether "the organism escapes in the fæces He considers that the only cases in which anything will be gained by examination of the fæces for the bacterium of beri beri will be those cases in which an acid diarrhœa exists Half of the book is taken up with five appendices In Appendix A are included all cases of beri beri admitted to the gaol hospital, Pudoh, Kwala Lumpor Federated Malay States, during the period in which it was in the author's charge Appendix B deals with an analysis of cases bearing on the first symptoms of the disease The bacteriology of beri beri is considered in Appendix C Appendix D deals with inoculation experiments and the final appendix consists of a number of prescriptions which have been found useful in the symptomatic treatment The Board of Trinity College, Dublin, has also published for the author "Extracts" from this essay, a small book of 52 pages published by Messrs J & A Churchill at the price of 1s 6d net This smaller work contains the essential part of the author's essay and as it is very practical we recommend it to the students of tropical medicine Both books contain an elaborate and useful table of differential diagnosis and the original essay has a chart of the rainfall and of beri beri cases, to show the non dependence of the disease upon the rainfall and the atmospheric conditions associated with it

The Field Naturalist's Quarterly September, 1904 — This quarterly which is now in its third year of publication, maintains its high standard of excellence Among the many articles of interest in the present issue that on the Salmon by Mr A Wade, F E S, will appeal to all who in any way take an interest in Salmo salar, and Fishermen and Insects by Mr C Morley, F E S, and Fishes useless to Man by Mr F G Aflalo, F R G S, will be welcomed by the pisciculturist as well as by the naturalist Dr G R Leighton the editor, continues his "Reptile Studies the present contribution being a chapter on Adder Hunting in the Highlands The announcement is made that in the forthcoming issue for March, 1905, an important series of articles on the Life history and Development of the Frog will be commenced The number under notice contains two examples of the illustrations which will accompany these articles representing (1) frog spawn taken in February last showing the eggs imbedded in a jelly like mass and (2) the protruding tadpoles as yet mouthless and living upon their unexhausted mass of yelk These illustrations are particularly well executed

Health in Infancy By T M ALLISON, M D Durh. Illustrated Newcastle on Tyne J and G Allan 1904 Pp 40 Price 1s —This little brochure of 40 pages, which is the substance of a paper read before the Newcastle Clinical Society in the year 1902, is a plea in favour of breast feeding for infants There is nothing new or original in the advice which Dr Allison gives in this little pamphlet, but then it is intended for mothers rather than for medical men or nurses to read It contains in the form of an appendix some rather elementary references to feeding clothing and nursery management So far as the information which is given in this list is concerned it is accurate, and doubtless Dr Allison's little book will be found useful by those for whom it is intended and will serve as a useful prelude to larger works upon the subject

THE LANCET.

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The Opening of the Medical Schools: the Introductory Addresses.

MEDICINE, in the generic significance of the term, presents to-day an *ensemble* of component arts and sciences so complex and heterogeneous that when we come to examine the collective demands made on the patience and endurance of the large number of students who espouse the calling of medicine it is impossible to despair of the future of the race. For a nation which can send so many of its sons to study for a profession from which so much is demanded and to which so little is given in return must possess unbounded confidence in its powers of intellectual endurance. In his opening address to the students of King's College Hospital Dr. T. BUZZARD explained the advantages which the possession of a medical degree conferred on those who held this honourable distinction and he exhorted all the students at this hospital, whether they intended to enter general practice or to devote themselves to any particular branch of the profession, to aim for the highest and not to be contented with merely a qualification to practise which could be more easily obtained. He further proceeded to explain that by the impending removal of the hospital itself to the Camberwell district the faculty of science of King's College would be left in exclusive possession of the field for the teaching of the preliminary and scientific subjects of the medical curriculum. Moreover, he anticipated that when the arrangements for the new University of London were completed King's College, owing to its central position and established facilities for scientific teaching, would attract a large number of students from other medical schools in London. He emphasised the fact, however, that no attempt would be made to alienate such students from the hospital to which they properly belonged by the compounding or reduction of fees; they were to be left absolutely free to select for themselves the hospital to which they would ultimately be attached. In the new arrangements which will be made by the University of London with regard to medical degrees, there can be little doubt that both King's College and University College will come in for a large share of the scientific teaching. Dr. BUZZARD was therefore probably well advised, in view of the jealousy which this centralisation may excite, to point out that there would be no encroaching on the rights of independent centres of purely medical teaching. It is exceedingly fortunate for both King's College and University College that they are at the present moment in the happy position of being able to separate their departments of medicine proper from the departments which are concerned with the teaching of the preliminary and scientific subjects. This provision for the expanding necessities of the London student of medicine was again referred to by Dr. S. H. O. MARTIN at University College when, in the capacity of dean, he presented the annual report at the opening of the winter session. So that with these and other proposed facilities for the more advanced scientific training of students it is probable that Dr. BUZZARD in no wise exaggerated the case when he remarked that "in its lately developed form the University of London was certainly coming to occupy the highest place in the education of the medical profession."

Professor ALEXANDER MACALISTER'S introductory address at St. George's Hospital on the Evolution of the Medical Curriculum further emphasises the power of intellectual endurance required and expected from the present-day medical student if, as Dr. BUZZARD recommends, he "aims at the highest." This aiming at the highest is a very different thing from *walking the hospitals*, an expression which perhaps fairly accurately represented the method of acquiring medical knowledge 30 or 40 years ago. Professor MACALISTER, who himself *walked the hospitals* as long ago as this, recalls in his address "being one of a mob of students who followed the surgeon round the wards on the chance of picking up some crumbs of wisdom" and how "not a few of his class fellows got their licence to practise without ever having put on a bandage, taken a case, written a prescription, or used a stethoscope"—a very different curriculum from that provided for the modern student. Professor J. N. COLLIE in his address to the students at University College Hospital left out no claim which can be urged in favour of the study of organic chemistry as a preliminary to the proper understanding of the functions of the human body; he compared the chemical process which takes place in the human laboratory to the mysterious workings of the machinery of a motor-car, and those who are familiar with the almost human machinations of these vehicles to conceal the origin of their pathological manifestations will appreciate the illustration. Dr. F. J. WETHERED at the Middlesex Hospital explained the necessity there was for the student to supplement with practical work the vast theoretical knowledge which is required for the exigencies of examination.

With the practical knowledge which only can be acquired by constant attendance in the wards Sir WILLIAM MACEWEN, who this year delivered the Huxley Address at the Charing Cross Hospital, chose as his subject the interesting pathological problem, the origin and causation of appendicitis. In declining to take the pessimistic view held by most biologists that the human body is full of organic imperfections he held that the cæcum and the appendix vermiformis were not the functionless organs that they were generally held to be. Shortly stated, his theory is that the ileo-cæcal valve exercises an automatic control over the amount of the contents of the bowel which pass from the small to the large intestine and that the rate of flow is determined reflexly by the power of the cæcum to digest and to deal with the food which reaches it. The Huxley Address certainly presents views which are original and interesting and which, though hardly calculated to impress the biological mind, may contain much that is true in them from the point of view of surgical treatment.

The majority of the addresses this year are certainly well worth reading and to those who would form a more intimate acquaintance with them we commend the full reports which we publish in another part of this issue

Operatives and Vision.

WE have received a copy of the *Rochdale Observer* of Sept 24th, containing a highly important letter from Dr GEORGE GEDDES of Heywood, on the question of defective sight among factory operatives and upon the great importance of leading employers to recognise that it would be sound policy for them to encourage the use of spectacles among their "hands,' as tending, whenever they are required, not only to the comfort and the security of the workers, but also to the production of better work The superstitions of ignorance and stupidity die hard, and one of them is a belief that a need for spectacles is necessarily, or even frequently, an evidence of defective or of failing sight and that the eyes supplied with them will nevertheless be of some thing below the proper standard of visual acuteness and endurance An analogous superstition is said to exist with reference to grey hair, insomuch that the principal purchasers of hair-dye, and the most frequent sufferers from the paralysis produced by the lead which it frequently contains, are not, as might be supposed, *les coiffeuses de Ste Catharine*, but honest hardworking men of middle age upon whose temples Time has written some indications of his progress Such men are frequently far superior to their juniors in skill and experience, and they are far less likely to be diverted from their duties by anxiety about possible "winners," but it is their sad experience that many employers will only give them work at reduced wages on the plea that they are "getting old' and are consequently of decreased efficiency Together with the grey hairs will come, of course, diminished power of accommodation, with its attendant diminution of acuteness of vision at a near point, and, although the consequent defect would not only be relieved by spectacles but so absolutely corrected as to leave nothing to be desired, the sufferers often do not dare to have recourse to them and struggle on, doing imperfect work by reason of imperfect sight, and not permitted to avail themselves of the assistance which would at once restore their eyes to the keenness of juvenility It is of course, possible that some part of the difficulty may have arisen from the frequency with which persons of the class described have in former years been supplied with inefficient glasses by the simple ignorance of watchmakers and other dealers in them, just as they are likely to be in the future by the pretentious ignorance of the self styled "optologists,' but this is a difficulty which it ought to be well within the power of the medical profession to obviate The medical officers of clubs and benefit societies should be in a position to prescribe unhesitatingly what is required and the various trade unions could do no more useful work than by insisting upon justice to their members in respect of permission to use spectacles without being subjected to loss

Dr GEDDES does not confine himself to the requirement of glasses arising from presbyopia but deals also with requirements arising from defective refraction, and therefore limited to no period of life Defective refraction may, of course, be associated with many forms of disease which then require to be taken separately into account and which may have a greater or less effect upon fitness for a particular industry But in the enormous majority of cases defects of refraction are defects of shape only, and these, while they may entail great suffering in continued use of the eyes upon near work, and imperfect work by reason of the suffering, admit of being absolutely corrected, with complete and immediate relief of all the consequences previously flowing from them The only forms of industry in which a need for spectacles should be regarded as a disqualification are those conducted in hot moist rooms in which dew would constantly be liable to collect upon the glasses and to obscure vision more or less completely It is to be hoped that the whole question of refraction in children will before long be seriously considered by the new educational authorities, and that a need for glasses, when it exists will not only be recognised and supplied at school but will also be attended in proper cases by an official declaration that no defect of sight, or inefficiency for any kind of ordinary work, is in the least degree implied In the meanwhile medical practitioners, and more especially certifying surgeons to factories and medical officers to clubs and benefit societies, might do excellent work by endeavouring to convince employers and foremen that it is very much better to have a particular 'hand," whether male or female, adult or child, working easily and comfortably and seeing well in glasses than to have the same person seeing badly without them and never unconscious of the struggle in which the eyes are engaged These are the two conditions between which they have constantly to choose and the choice actually made is usually the wrong one Employers would be fully entitled to ask that any 'hand' who wore spectacles should produce a medical certificate of good vision when provided with them, but no more than this could reasonably be required Dr GEDDES deserves the thanks of the whole operative class for the manner in which he has taken up the question and we hope that his benevolent endeavours will before long be crowned with the success which they so well deserve

Discretionary Powers in Dispensing.

ON many previous occasions during the last few months it has been our duty to call attention to the unsatisfactory relationships which have been springing up between medical men and dispensing druggists In general the medical practitioners have been assailed for encroaching upon the domain of the dispensing druggist and we have frequently indicated that, in our opinion, local conditions often force the practitioner to dispense his own medicines even if such dispensing be distasteful to him From the other side it has often been suggested that from lack of training this practice is prejudicial to the public and that it encourages the use of stock mixtures It has also been urged that the dispensing druggist labours under a further disadvantage since the drugs which he supplies may be officially examined and he is subject to prosecution if they are not of the standard established in the British Pharmacopœia He has been represented as a highly trained individual anxious

to work for the public welfare and hampered in his desires to carry out instructions *secundum artem* by the unworthy competition of the practitioner who dispenses his own medicines. That there is another side to the picture has been painfully emphasised by some recent disclosures which show that the dispensing druggist cannot always be trusted to perform the simplest possible functions—for example, to dispense accurately when a clearly written prescription is placed before him or to exercise due discretion with regard to the sale of poisons to the public. In two cases, the details of which are supplied to us by our Birmingham correspondent,[1] test prescriptions were carefully and legibly written by the assistant medical officer of the health department of Birmingham and taken by a representative to two different shops. In each case the result formed the foundation of a prosecution. In one there was distinct evidence of gross carelessness; a six-ounce mixture had been ordered and the directions were that the dose should be a teaspoonful. The capacity of the bottle supplied was only five and a quarter ounces, the amount of active ingredient fell a little short of the quantity ordered, and the dose given on the bottle was a tablespoonful instead of a teaspoonful. This last was the most important error and yet there was clearly no intention to defraud; it was so obviously an error—an accident of momentary thoughtlessness—that this incident was closed with censure and with the payment of the costs of the prosecution.

The second case was far more important and its gravity was accentuated by the line of defence. According to the prescription the six-ounce mixture should have contained 240 grains of quinine sulphate and the directions showed that the dose was to be "a dessertspoonful every four hours as required." The dispenser made inquiry as to the severity of the case and remarked upon the extraordinary dose. He supplied a mixture, however, and only indicated that he had not followed the directions when the bottle was handed to an inspector. Thinking that there had been a mistake he said that he had put in half a drachm of quinine sulphate instead of four drachms. His defence was that he should not think of putting half an ounce of quinine into a six-ounce mixture, that the ordinary dose was from one grain to two grains, and that he thought the prescription was too well written to have come from a medical man, and concluded that it was a copy. As against this it was evident that there was no mistake, since four drachms of quinine sulphate had been clearly written in the prescription, so that there could be no confusion or error in the use of the symbol for half an ounce in lieu of that for half a drachm. The whole point turned on the duty of the dispenser when confronted with conditions which, in his opinion, were unusual and the bench held that he might have absolved himself from all responsibility by consulting the prescriber. With regard to both cases it will be generally admitted that it is not customary to write a prescription for a six-ounce mixture with directions that the dose should be only a teaspoonful or a dessertspoonful, but in neither case was there any ingredient which would be liable to cause fermentative or other changes in the mixture. Provided the limits of solubility were not exceeded there was no reason why the prescription should not have been dispensed in accordance with instructions. If the dispenser felt any reasonable doubt about the propriety of the dose or the possibility of error, surely it would have been more in accordance with general custom for him to have communicated with the prescriber instead of reducing the dose to an eighth part of that ordered. The responsibility for the dose of any drug prescribed rests solely with the medical practitioner, and although material assistance is afforded by the Pharmacopœia it must not be forgotten that the doses mentioned therein are intended for general guidance and are not authoritatively enjoined. In this case, however, the dose (ten grains) does not exceed Pharmacopœial limits, even if it was not in accordance with the ideas of the dispenser of the "ordinary dose."

We have no desire to foment discord or to introduce any spirit of bitterness into a controversy on the relations which should subsist between the prescriber and the dispenser. For the maintenance of harmony it must be clearly understood that the discretionary powers of the dispenser must not entail any prospect of alteration of dose. There must be a sense of security in the coöperation, a security based on the assumption that no radical change will be made without previous notification. Generally speaking, when a prescription presents any unusual feature it is customary for the dispenser to communicate discreetly with the medical man and to satisfy himself that this is intentional. Many practitioners are able to recall with gratitude instances of their indebtedness to those who have courteously followed this practice. It is often difficult to concentrate attention upon the prescription while the patient or his friends are seizing upon a momentary lull to pour out a fresh list of symptoms or inquiries. The *entente cordiale* between prescriber and dispenser can only be maintained when the former is sure that his intentions will be implicitly followed, unless it is necessary to refer to him in the face of presumably obvious error.

With regard to the sale of poisons to the public and the discretionary power of the dispenser it is curious that within the past few days two inquests have been held by the same coroner in which death resulted from the employment of overdoses of morphine. In the first case the morphine was originally prescribed for the mother of the deceased some ten years before and the supply had been made up so often that the druggist did not deem it necessary to see the prescription every time. In the second case the poison had been supplied on the presentation of a prescription, written and initialled by the deceased, a French advocate. One jury recommended that there should be some restriction on the use of old prescriptions, while the other suggested that greater precautions should be taken to ascertain that prescriptions bore the full names and addresses of duly qualified medical practitioners. These two cases throw such a lurid light upon the "discretion" displayed in the sale of morphine that comment becomes almost superfluous. All attempts to check the development of the morphine habit or to reduce the number of cases of "suicide whilst temporarily insane" become futile so long as dispensing druggists in the exercise of their "discretion" repeat prescriptions containing poisons over and over again without further endorsement by the

[1] THE LANCET, Sept. 24th, 1904, p. 922.

prescriber or take no trouble to ascertain that the prescription was ever written by a medical man. The dispenser who made up the above out of date prescription for morphine admitted that he knew it had been written by a medical man who was then dead. "Discretion in dispensing" seems to be more necessary in the supply of poisons to the public than in the modification and alteration of prescriptions clearly written by medical practitioners

Annotations.

"Ne quid nimis"

THE OUTBREAK OF SMALL-POX IN DEWSBURY.

LOCAL government is, in our view, an eminently healthy force but, like all human affairs, it has its abuses as well as its uses. At times it stimulates by its vigorous initiative the somewhat dormant activities of the central department, at others, by its ineptitude and the persistent neglect of its most elementary duties it calls for the firm intervention of the Local Government Board Dewsbury and its small-pox appear to afford an admirable illustration of the negligent phase of local government evolution With from 30 to 40 cases of small-pox weekly Dewsbury seems to fail in appreciation of its responsibilities to the public The isolation accommodation is inadequate and unsuitable and the Dewsbury board of guardians has refused to open stations to facilitate the work of vaccination and re-vaccination upon economical lines, preferring that the work, if done at all, should be performed in the most costly and difficult manner. In these circumstances we are not surprised to read in the *Times* that "the public is becoming indignant at the manner in which the officials are dealing with the epidemic," although we should be glad to know precisely how much of the blame is due to the officials and how much to the town council, the board of guardians, and the Dewsbury joint hospital board To begin with, the town council pays a general practitioner £80 a year to supervise the health of 28,000 people, and it is not therefore a matter for surprise that this medical officer of health has temporarily broken down under the present strain and that another general practitioner has had to be appointed to do the work This town council also possesses a hospital which is inadequate in size, improperly situated, and badly administered There are about 100 cases "isolated" in the building and the disease is spreading therefrom to the surrounding population. There is no resident medical officer and the patients who have been discharged allege that the staff of nurses is inadequate We hear rumours, too, of a delirious patient escaping in his nightshirt and eventually reaching his home The Dewsbury board of guardians, and it should be noted that the Dewsbury union embraces numerous and important urban districts, is markedly antivaccinationist in its administrative tendencies It has also to be numbered among those who recently raised an "economic" cry and who protested against the excessive cost of vaccination Its chairman, it is reported, gave evidence before the departmental committee appointed to consider these allegations of excessive cost Now that small-pox is in its midst this very board, led presumably by the same chairman, has refused to open stations and so to save the public funds Meanwhile the disease is spreading to other districts within its limits The Dewsbury joint hospital board, which is also responsible for the isolation of cases of infectious diseases occurring in other districts than Dewsbury, has hitherto failed to provide accommodation for small-pox and its hospital for diseases other than small-pox is unsuitable for the isolation of this latter malady. Hence the Dewsbury town council has to "isolate" in the building to which reference has been made and an unfortunate disaster in the shape of a fire has recently destroyed in large measure some additions which were being made to this building. All this is eminently unsatisfactory and it betrays a local prevalence of that administrative inefficiency which it should be the aim of the central department to put an end to The only remedy which would be likely to take effect at once would be strong action on the part of the Local Government Board This Board has, we are glad to see, sent down one of its medical inspectors and as a result of his visit reforms are being urged upon the town council We must confess that we should like to see the Board take the administration of the Vaccination Act out of the hands of the guardians and confer these duties, for the time at least, upon the West Riding county council, and it would also be a salutary lesson if the functions of the Dewsbury town council could also be transferred in similar fashion Were this possible a lesson would be taught to negligent and obstinate local authorities throughout the country which they would not be likely to forget

IN THE MATTER OF PATENT MEDICINES.

THE German correspondent whose letter on this subject we commented upon in THE LANCET of August 27th (p 625) has returned to the charge with a long communication in which he dismisses our opinion upon the legal aspect of patent rights in medicinal compounds almost with contempt but devotes several pages to the ethical side of the question. His principal argument in support of his view that a monopoly granted to a discoverer of a new method of healing a given disease would not be contrary to public policy appears to be that the pecuniary profit to be derived from the invention acts as a stimulus to the would be inventor who otherwise would not be encouraged to devote time and study to his task He says on this point "You cannot demand of the discoverer of a new remedy to renounce all personal benefit and to make a present to the public of his discovery which perhaps is the result of years of labour and large expense" This, however, is what without any demand from anyone, men of science of all nationalities have ever done. They have devoted the best years of their lives to investigation and research simply for the benefit of mankind and have reaped from their efforts no pecuniary benefit in any sense proportionate to their achievements, which have been made literally a present to the public Although we have pointed out that patent rights claimed for supposed medicinal inventions, as a rule, would be difficult to maintain in courts of law, instances can be given of discoveries which might quite possibly have been so protected and a single one should suffice to show how much the public would have suffered thereby We may suggest vaccination as a scientific discovery which probably was at the time of its origin quite capable of being converted into a monopoly for its great discoverer by means of letters patent. Had he availed himself of his opportunity, as our correspondent would suggest that men of science should do, one of two things might have happened He might have realised a vast fortune for himself and his descendants, to which Germany, no less than other nations, would have contributed, or, what is far more likely, the salvation of civilised mankind from the ravages of small pox would either not have taken place or would have been postponed until his patent rights had expired The patenting of nostrums or of ordinary chemical formulæ by quacks is quite a different matter. Their sale may be aided thereby but it takes place equally through the registration of trade marks and the aid afforded by copious

advertisement. Patent medicines of this class encourage ignorant people to experiment upon themselves with drugs the uses of which they cannot understand and to trust to useless or dangerous concoctions instead of either letting themselves alone or following if they are ill the advice of a medical practitioner. The patent rights claimed for goods of this kind would make very little difference to anyone who had any desire to obtain a similar article without having recourse to the patentee.

TECHNICAL INSTRUCTION FOR PLUMBERS.

THE Worshipful Company of Plumbers has issued a second series of diagrams for the use of teachers of classes for technical instruction in plumbing. They consist of 12 sheets measuring 53 by 31 inches. The subjects dealt with are pneumatics as applied to syphons and pumps; the construction of such fittings as flushing cisterns and water-taps; and various forms of gutters and lead work used in roof construction. An aero-hydrogen gas generator is also shown, the flame from which is utilised for joining lead by fusion. Three sheets are devoted to illustrate domestic hot-water work. In these the difficulty of showing the ramifications of such a system in an intelligible manner, within the limits of a theoretical drawing, has been well surmounted. These drawings are good and in the hands of a practical instructor will be a boon to teacher and pupil. The drawings are also reproduced in pamphlet form. It is presumed that these last are intended for the student's home use, after attendance at the classes, otherwise the explanatory notes are too brief, a certain knowledge of detail being presupposed. We can, however, strongly recommend them to the notice of all who take an interest in plumbing details and congratulate the Plumbers' Company on the good work in which it is engaged. The diagrams and pamphlets are published at the office of the Company at No. 1, Adelaide-buildings, London Bridge, E.C. The prices are: diagrams, £3 3*s*. the set of 12; and pamphlets, 1*s*. each.

QUADRUPLETS.

THE occurrence of four children at a birth is of sufficient rarity to render the record of all such cases of much importance. A very interesting case of quadruplets is described in the present number of THE LANCET by Miss A. C. Gowdey. Amongst 1,971,759 births registered in Berlin during the 74 years from 1825 to 1898 quadruplets were met with three times only, or a frequency of one in 657,253, or 0·0015 per 1000 births. The exact frequency of this condition is difficult to determine but these figures show how rare it is. Some 100 or more cases could no doubt be collected from the literature and 72 are mentioned by Gould as recorded in the catalogue of the Library of the Surgeon-General's Office, United States Army. There are several points of interest in the present case, amongst them the age of the patient and the fact that it was her sixth pregnancy. The researches of Matthews Duncan and Göhlert have shown that while the age of the woman at which the birth of twins is most probable is the period of five years from 25 to 29, the occurrence of triplets, on the other hand, is more probable during the five years from 30 to 34. Mirabeau's observations on 75 cases of triplets also tend to confirm these conclusions, whilst he has shown that the tendency to multiple pregnancies increases with the multiparity of the patient. Triplets, for example, according to Mirabeau and Saniter, are most likely to occur in women who have borne six children or more. Matthews Duncan also showed that the number of multiple pregnancies is directly proportional to the general fertility of the woman and the proportion of triplets is in direct relationship to the number of twin pregnancies occurring in any country. In Russia, for example, where the frequency of twin pregnancies amounts to about 1 in every 48 births, triplets occur once in 4000 births, while in France, where twin pregnancies only occur once in every 99 births, triplets occur about once in 8000 births. The greater the fertility of any race the greater its tendency to the production of multiple births. In quadruplets it is more common to find the children of different sex than of the same sex; in 23 out of 36 cases of this kind collected by Veit the sexes were different and in nine of the 23 there were two boys and two girls, as in the present case. Labour is usually premature and the children are most often stillborn, but both Nagel and Tarnier have recorded cases of quadruplets born alive at full term. In the present instance the combined weight of the four fœtuses amounted to about 2600 grammes, but a most remarkable case is recorded by Bayer in which the total weight of the four children amounted to as much as 9500 grammes or about 19 pounds. The uniovular development of each child and the presence of separate chorions are interesting and uncommon, as Miss Gowdey points out. Corradi in an examination of 14 cases of quadruplets found only two in which there were four placentæ. The most interesting case of all is, however, that described by Panizza, in which there were only one placenta and one chorion. The specimen is preserved in the museum at Pavia and the chorionic cavity contains two male fœtuses and an omphalopagus of male sex.

RUPTURE OF THE VAGINA DURING LABOUR.

RUPTURE of the vagina occurring during labour without any rupture of the lower uterine segment is a rare accident. The extension of a tear of the cervix into the vagina is, of course, not an uncommon event, but a tear of one or other of the vaginal fornices alone is seldom seen. In THE LANCET of Oct. 1st, p. 951, an interesting case of this description is recorded by Dr. P. L. Townley. In this instance examination under an anæsthetic seemed to show that the tear involved the vagina alone. It is often impossible to make quite sure during life that such is the case owing to the extreme thinning that the tissues of the cervix may undergo and the difficulty of determining that the tear does not extend beyond the fornix to the adjacent part of the cervix, and in the present case this possible source of error exists. Tears of the vagina may occur even where there has been no interference with the normal course of labour and where no operative procedure has been undertaken. Writing in 1901 Dr. Mieczyslaw Kaufman was able to collect nearly 100 cases from the literature, including two observed by himself. The maternal mortality from this accident is very high, amounting to about 70 to 75 per cent., and in this it resembles rupture of the uterus, the mortality of which, even with all the advantages of modern surgery, still amounts to about the same figure. The diagnosis of the condition is usually a simple one and not infrequently a loop of intestine is found in the vagina when the patient is examined. In the case recorded by Dr. Townley the condition of the patient was so grave that no treatment directed to the tear could be carried out, although he succeeded with considerable difficulty in delivering the child from the abdominal cavity by embryotomy. In cases where any part of the child or placenta has passed into the peritoneal cavity or where there is severe intraperitoneal hæmorrhage the best course to pursue is no doubt abdominal section if the patient is in a condition to stand the operation. In other cases so long as no septic infection is present the tear should be sutured from the vagina, but where this proves impossible or where there is any sign of septic infection the best plan is to treat the case by the use of a gauze vaginal plug. In the great majority of cases of this description the tear is situated in the posterior fornix of the vagina and Douglas's pouch is opened up; the case recorded in our columns is the more

interesting since the tear appears to have taken place through the anterior vaginal fornix, a very unusual site for such a lesion.

SUTURE OF WOUND OF THE HEART.

SUTURE of wound of the heart has recently become a recognised operation for which we are indebted to continental surgeons. This is chiefly due to the fact that stabbing is much less common in this country than in many others. In the *American Journal of the Medical Sciences* for September Dr. Francis T. Stewart has recorded the following case. A man, aged 20 years, was stabbed with a long rusty knife. He felt severe pain but was able to walk to hospital, a distance of "one and a half squares." Then he began to feel weak and was found crawling up the steps leading to the entrance. There was a small wound above the third rib about one inch to the left of the sternum. It was surrounded by an emphysematous swelling and bled continuously, the stream being accelerated by each expiration. The temperature was 97° F. and the pulse was 80, weak, and irregular in volume and rhythm. He was sweating and very pale and lay on his right side breathing 40 times to the minute in a short jerky manner. At times he complained of a little pain and severe dyspnœa. He had vomited once. The whole of the left chest was tympanitic except a small area around the wound. On auscultation the heart sounds were heard indistinctly. Under ether an operation was begun 45 minutes after the infliction of the wound. An incision was carried along the second rib for four inches to the sternum, down the left margin of the sternum to the fourth rib, and outwards along the fourth rib for four inches. The musculo-cutaneous flap so formed was dissected back and an opening in the chest was found between the third and fourth ribs, the knife having descended in its passage. The exposure was made more complete by continuing the sternal incision downward for two inches and the triangular flap thus formed was retracted. The third and fourth ribs were severed and forcibly turned towards the right, fracturing the costal cartilages near the sternum. The knife was found to have passed through the pleural cavity and wounded the anterior edge of the left lung. The lung had collapsed into the vertebral groove and the pleural cavity contained a large quantity of clotted and fluid blood. An opening into the pericardium, measuring three-eighths of an inch, was easily found by the spurting of blood with each pulsation of the heart. It was enlarged in the axis of the heart and a penetrating wound of the anterior wall of the left ventricle was found. It was parallel to the axis of the heart and measured about three quarters of an inch, being thus larger than the cutaneous, pleural, or pericardial wounds. Bleeding from this wound was free and continuous. The heart looked like a quivering mass of muscle and was beating so rapidly that it could not be said at what period of its cycle the hæmorrhage was greatest. The wound was closed by six stitches of continuous silk suture. During the suturing the coronary artery was punctured by the needle, causing profuse hæmorrhage which was controlled by an additional suture. The pericardial and pleural cavities were cleared of blood. The pericardial wound was closed with a continuous silk suture, a small opening being left for the passage of a gauze drain. The lung, which was not bleeding, and the parietal pleura were not sutured. A gauze drain was also placed in the pleural cavity. The severed ribs were approximated and the soft parts were sutured with silkworm gut. During the operation 24 ounces of saline solution containing adrenalin were injected into the circulation and strychnine and atropine were injected subcutaneously. On the following day the temperature was 103·4°, the pulse was 130, the respirations were 56, and the patient was delirious. During the next fortnight he continued to be very ill and suppuration took place beneath the flap. Then convalescence proceeded. The ribs united firmly with little callus formation. On the fifty-sixth day the patient was discharged; the pulse varied between 80 and 90; the left chest expanded little on inspiration and the breathing was slightly harsh. Ancient writers considered wounds of the heart immediately fatal but at the end of the sixteenth century Ambrose Paré published his celebrated case of a man who received a rapier thrust below the left nipple and pursued his antagonist 200 paces before falling down dead. At the beginning of the nineteenth century Jamain, Zannetti, and others wrote on the viability of patients after wounds of the heart, but it was not until 1867, when Fischer published his classical paper on 452 cases of wound of the heart, that it was shown that a person might live for days with a wound of the heart and that in from 7 to 10 per cent. of the cases recovery takes place.[1] In 1895 Rosenthal successfully sutured an experimental wound of the canine heart. In 1896 two unsuccessful attempts to suture wounds of the human heart were made and in 1897 Rehn published the first successful case Up to the present 60 cases of cardiac suture have been recorded with the surprisingly high recovery-rate of 38 per cent. Five of the cases were gunshot wounds and in two of these recovery took place. The symptoms of wound of the heart vary. If the pleura is wounded and blood escapes into the pleural cavity there are anæmia and the signs of pneumo-hæmothorax. A splashing sound indicates pneumo-hæmopericardium; in some cases a friction sound is heard. If there is external hæmorrhage the stream may be continuous or in jets. If the blood is confined to the pericardium the pulse is very feeble and death may result from pressure on the heart. The diagnosis of wound of the heart may be difficult or impossible. The position of the external wound is not a safe guide. The rule in doubtful cases should be to enlarge the wound, to ascertain if it penetrates the chest wall, and if there be symptoms of hæmorrhage or of pressure on the heart to operate.

VIRTUE—BUT "NO CAKES AND ALE."

WE are accustomed to read the *Saturday Review* with a sense of due deference to staid and careful wisdom. When therefore our eye falls upon an article headed "A Fashionable Doctor," we anticipate a polite but possibly critical survey of the class of medical men who may properly be called "fashionable." For that there is such a class—at any rate in popular fancy—cannot be denied. We must confess to disappointment in our anticipations. The writer has not realised, to begin with, that a medical man may have "fashionableness" thrust upon him and that to be "fashionable" is therefore not necessarily to be incompetent. Moreover, he stultifies himself by declaring in one line that he does not ask "that the modern physician should be a recluse" and in another putting the rhetorical question, "Has the physician any right to lead the social life?" Anybody more acquainted with the duties of, or the calls upon, the physician than is evidently the case with the writer of the article would know that not to "lead the social life" is for a physician to cut himself off at once from a vast and most important field of knowledge and of observation. It is absolutely necessary for the physician in a large city to see for himself and intimately to understand that life the accompanying ills of which he is called upon to treat and to prevent. As our paragraphist himself avers, the physician should show "special evidence of discipline and self-restraint." Nowhere, we imagine, can such evidence be given proper prominence but among the very people who are to learn the lesson. The physician must be not merely

[1] Archiv für Klinische Chirurgie, Band ix., 1867–68.

in the world but to a large extent of the world, too, if he is to have that beneficial influence which the reviewer rightly places not merely on a physical, but also on a spiritual, plane: For it is a truism to assert the inseparableness of purity of body and of physical conduct from a high standard of intellectual and of spiritual existence. Yet the chief grievance that the writer seems to feel is that when he went to consult a "fashionable physician" a party was taking place at the house. On the writer's own showing it seems to us the duty of the physician to entertain his friends, if only to show how such entertainment can be carried out in a decent, moderate, hospitable, and proper spirit. There are undoubtedly persons who consider that the medical man should be a constant and unfailing and inevitably ready convenience for the rest of his fellow creatures. In the minds of such people it is almost criminal for a medical man to be prevented by indisposition from visiting his patients and it was, no doubt, one of this class who recently formulated a complaint to the board of a London hospital because his servant who went there with a trifling injury at 2 A.M. actually had to wait ten minutes before his wound was dressed. The house surgeon was in bed. A house surgeon, of course, has no right to require sleep. We commend this true story to the careful consideration of the "Saturday Reviewer," for the moral of it is applicable to his own point of view.

ARTERIO-SCLEROSIS AS A SEQUEL OF INFECTIOUS DISEASE.

ARTERIO-SCLEROSIS has been for some years suspected of developing as a sequel to infectious diseases such as typhoid fever and influenza, but exact information has been wanting as to both causal relation and frequency in different classes of cases. In the *Journal of the American Medical Association* of Sept. 10th Dr. W. S. Thayer, assistant professor of medicine at Johns Hopkins University, and Dr. C. E. Brush, physician to Johns Hopkins Hospital, give the results of a lengthy study of 4000 cases (many of which were personally seen) in the wards and at the clinic of Professor Osler in the hospital which have a bearing on the subject of arterio-sclerosis. A recent investigation suggested to the writers the desirability of investigating the sequelæ of typhoid fever as shown by the development of sclerotic changes in the arteries. 189 patients who had suffered from typhoid fever were examined and observed at periods varying from a few months to a few years after their recovery with the following results. First, the radial arteries were found to be palpable in a very large proportion of the post-typhoid cases as compared with healthy (control) cases of the same age. Thus, of patients who had had typhoid fever 48½ per cent. showed palpable radial arteries as compared with a ratio of 17 per cent. for those who had not had typhoid fever. This held for all decades of life from ten to 50 years of age and was not essentially modified in tables from which all cases giving a history of serious infections (other than typhoid fever) or alcoholic habits had been excluded. Secondly, the average blood pressure, as indicated by the Riva-Rocca manometer, was materially higher among "old typhoid" patients than among others, decade for decade, and the same applied to the size of the heart (dilatation), which was larger in the former class of cases. Thirdly, the post-mortem examination of 52 aortas in fatal cases of typhoid fever showed sclerotic changes in 30 and of these at least 21 were found to be fresh aortic endocarditis. In many of the necropsies a co-existing coronary arteritis was also noted. The rôle of infectious disease in producing arteritis both in the great and small vessels is thus considered as established. Patients of the age of 50 years and upwards were excluded from this inquiry because of the possible occurrence of early senile calcification of their arteries. A study of the total number of 4000 patients in every decade of life from the first to the fifth showed a higher degree of hardness and sclerosis of the radial arteries in cases of hard work and persons of alcoholic habits, as compared with those who did not do hard muscular work or indulge in alcohol. Of the acute specific fevers, rheumatic, typhoid, and malarial fever were, in descending order of potency, causes of arterio-sclerotic sequelæ. It was impossible to ascertain the part played by syphilis as a factor in arterio sclerosis in the whole body of cases examined, as trustworthy histories were difficult to obtain. Heavy physical labour and alcoholic stimuli were the most potent of the non-infectious causes. "It seems to us," say Professor Thayer and Dr. Brush, "that the main etiological factor in the development of the thickening [of the intima] in arterio-sclerosis is the over-strain of the vascular walls from continued and intermittent high tension whatever its cause. ..... It is not inconceivable that the rôle of the acute infections may be rather in the production of those focal degenerations which constitute the other important element in arterio-sclerosis."

POPULUS VULT DECIPI—.

THE medical profession is ignorant of many things. It knows but little about the processes of life or of death while the etiology of many diseases is still an unsolved problem. But we were never before so painfully convinced of our ignorance about matters which seriously affect ourselves until we read the following letter which appeared in our contemporary the *Pall Mall Gazette* for Sept. 29th:—

PNEUMONIA AND THE PUBLIC.

To the Editor of the PALL MALL GAZETTE.

[illegible] statement made by "Another Physician" that [illegible] off the register for prescribing remedies not in [illegible] ry one who has friends among the faculty must know this to be the case.

I do not wish to be disrespectful to the noble profession, but it is a fact that it is as much a trade union as any other body. To begin with, a medical man takes an oath (a copy of which I have by me) promising not to adopt any method of treatment not recognised by the legalised colleges. Also, he is not permitted to enter into consultation with any medical practitioner not of the allopathic body; though many I know are sufficiently generous to break this law by consulting with homœopaths.

A friend of mine, an M.D., recently attempted to become the medical consultant of an electric bath establishment. I was shocked to hear from him that the idea had to be given up, as he was warned by the "authorities that be" that if he attempted to carry out the project he would be brought up before the Medical Council, which means that he would have to choose between abandoning this work or being struck off the Medical Register.

I know also an instance o: [illegible] the satisfaction of medical [illegible] simple [illegible] for a terribly large tumour from which s [illegible] man did visit her, and ordered her to be op[illegible] ich advice she refused to follow. Another medical man was then called in, who declared the operation to be unnecessary. A third medical man, hearing of his case, wrote to the patient saying that if the second medical man continued to treat her, when she died he would advise the coroner of her district and have the second medical man brought up before the Medical Council for the purpose of being struck off the register for "truckling" with the people who advised her to carry out the hygienic treatment. This occurred five or six years ago, and she is now in better health than ever she was before.

Of course, the public suffer in all this as well as the science of healing. Under such conditions the healing science cannot progress. The section of the profession, bound down by their oath and medical etiquette, tyrannises over the other who would be willing to try any reasonably proposed treatment, no matter what its source.

I am, &c.,

Sept. 25th. ANOTHER OF THE PUBLIC.

We shudder when we think how many men are in danger of the Council for having prescribed the glycerophosphates; nay, more, when we think that the General Medical Council itself should condemn its members to be struck off its own register seeing that all of them at one time or another have probably prescribed syrupus ferri phosphatis compositus. The oath about which "Another of the Public" speaks is quite new to us, but as he or she has a copy by him or her perhaps he or she will kindly send us the copy to look at. The story of the "terribly large tumour" is only one more proof of the tendency of the members of the medical profession not to let the right hand

know what the left doeth. We never before heard of any medical man so artlessly stepping into the conduct of a case with which he obviously had nothing to do as did No. 3 in the story referred to above and we wonder whether the simple hygienic treatment is the swindle run by the Viavi Company. Possibly "Another of the Public" will be good enough to supply us with "corroborative detail, intended to give artistic veri-similitude to a bald and unconvincing narrative," by sending us the names of the three practitioners concerned and of "the people who advised her to carry out the hygienic treatment;" but probably he or she will prefer not to do so.

PLAGUE IN THE RIVER TYNE.

WE understand that no further case of plague has been discovered by the medical staff of the river Tyne port sanitary authority since one of the crew of the s.s. *Bishopsgate* was removed to the floating hospital, as mentioned in THE LANCET of Oct. 1st, p. 966. The vessel was disinfected and up to the time of leaving the port the remainder of the crew were "all well." The condition of the patient is quite favourable. As he was removed to the hospital on Sept. 21st it is possible that there will be no extension of the disease.

APHASIA AND THE CEREBRAL SPEECH ZONE.

IT is now known that the cerebral zone of speech includes several centres in the cerebral cortex and that the aggregate of these covers nearly a fourth of the lateral aspect of the left cerebral hemisphere. In the *American Journal of the Medical Sciences* for September Professor Charles K. Mills of the University of Pennsylvania discusses, with the help of several illustrative specimens and clinical cases, the question of the various functions which constitute speech and the location of the various centres which coöperate in the process of speech. Five areas are enumerated—viz., the auditory centre for the perception of spoken words, which is located in the posterior three-fourths of the first and second temporal gyri; the speech-uttering centre of Broca, to which should be added, says Professor Mills, the adjacent anterior half of the insula; the "graphic" centre, which is concerned with writing and is located in the posterior part of the second frontal convolution; the visual word centre, located in the angular gyrus; and the "naming" centre, in the third temporal convolution. These five centres, adds Professor Mills, are variously connected with each other by association tracts. Clinical evidence is quoted to show that the pre-insula (anterior part of the insula) is part of the centre of speech utterance, a view supported by recent investigations of Dr. E. A. Spitzka of New York, to which reference has been made in a previous issue of THE LANCET.[1] "I believe," says Professor Mills, "that Broca's centre and the anterior part of the insula constitute conjointly the same speech centre. ..... Neither of these areas has projection fibres. Here language is organised for the use of the executive centres concerned with speech—viz., the facial, lingual, and laryngeal subcentres situated anteriorly to the foot of the fissure of Rolando. ..... In the insula and Broca's convolution, to use the idea suggested by Broadbent, language is organised into propositions." They constitute conjointly what might be termed a language arrangement area, but another area concerned with the attachment of names to concrete concepts, a "propositioning centre," occurs, adds Professor Mills, in the inferior temporal gyrus. The fissure of Rolando in the human brain is only confluent with the Sylvian fissure in extremely rare cases and the entire gyral mass which normally separates its lower end from the Sylvian fossa may be concerned with movements which pertain to articulation. The acquisition of speech is the first great step in the separation of man from animals lower in the scale. Relatively the brain of the gorilla and of the other anthropoid apes, concludes Professor Mills, shows lack of development in the region given over in man to the function (area) of speech, while in these animals the primary centres for vision, audition, and movements are largely developed. *Per contra* the speech-uttering areas have broadened and extended in man, while a new area for word-writing (graphic centre) has also developed as a sequel to, and in association with, the higher development of the speech centres.

[1] The Brains of Two Distinguished Physicians, THE LANCET, May 25th, 1901, p. 1483.

THE STANDARDISATION OF DISINFECTANTS.

No small controversy is being centred round the question of the standardisation of disinfectants, some manufacturers urging that any attempt to bring legislative control to bear upon the subject would be impracticable and vexatious to the trade, while others maintain that the public should be efficiently protected, if possible by statute, against the sale of disinfectants which are practically worthless as such. For ourselves we welcome any addition to the statute which is calculated to secure to the public honest dealing and the supply of goods which are of the nature, substance, and quality demanded. It certainly is not honest dealing to sell as a disinfectant a preparation which has no disinfecting property at all. What else does a purchaser expect to get when he asks for a disinfectant except it be a preparation which will disinfect and which therefore he trusts to prevent the spread of infection and disease? The sale of substances as disinfectants which prove to have little or no germicidal efficiency at all is indeed a very serious matter when we come to consider the issue which hangs on the power of that substance to destroy germs. Considerable mischief might obviously be done by the false sense of security which the employment of a practically inert preparation would convey. The question doubtless presents a few difficulties as to the exact lines on which standardisation should be adopted in regard to the various kinds of preparations used for the purpose, but the real test should, of course, be based upon the power of the preparation to destroy organisms, and bacteriological schemes of examination are surely not so difficult to formulate that a standard method cannot be found and applied to the control of the sale of disinfectants. It is, at all events, only right to expect that a disinfectant preparation, having regard to its applications, should conform to a standard of bactericidal efficiency. A satisfactory and reasonable unit can surely be established.

A NEW PRISONERS' AID SOCIETY.

No one has greater need of a friend than the man who is in fault. If he has in addition expiated his offence it seems harder to deny a claim to friendly help. The prisoner who has served his time in gaol is in this position and a question, to him of the greatest present and future significance, at once arises, How will he be received in the society of his fellow men? Upon the answer to this question much will depend, while, on the other hand, any such response must in the circumstances be a conditional one. It is in recognition of these facts and the difficulties which they entail that the Prisoners' Aid Society has become established in this country. It is founded on a principle of mutual fairness. It meets the liberated offender with a message of hospitality and a fair offer to put him in the way of employment if he will on his own part endeavour to justify such assistance by a return to industrious and honest life. The plan is at once business-like and humane. After an extended trial in the mother country, where its results have been encouraging, it has begun to take root in her colonies also,

demonstrating the progress made in the various departments of manufacture which are ·rk of the physician and surgeon. At th: men, students, and all those interested in hygienic science could procure trustworthy information concerning foods, appliances, clothing, and everything affecting the health of the person and the home. Sir Joseph Fayrer particularly emphasised the important point that the institute would be self-supporting and it was satisfactory to know that already applications had been made for spaces to exhibit which would nearly cover the working expenses. As time progressed and the advance of scientific inquiry revealed more and more of the laws which controlled and regulated hygienic questions the collection of object lessons would also increase and in that way the knowledge acquired by the study of the great questions concerned in the preservation of health and the prevention of disease would become more widely diffused and so form part of the common stock of knowledge of all educated persons and thus influence beneficially the domestic and social questions involved in the preservation of the public health. Preventable diseases the result of insanitary conditions killed many thousands yearly, and considering the large number of cases of illness for each death it was calculated that 78,500,000 days of labour were lost in the country annually which represented a loss of £7,750,000 per year. The knowledge that would be diffused by the Institute of Hygiene would gradually tend to mitigate such conditions and to obviate this wasteful expenditure of health and life and in so doing it would promote not only the moral but also the physical welfare of the people. Sir Joseph Fayrer concluded by asking all to give the institute their warm support in every way possible.

Dr. J. W. H. EYRE, in proposing a vote of thanks to Sir Joseph Fayrer, said that there was abundant evidence of the ability of the institute to succeed and he hoped it would carry out to the full its aims and objects.

Dr. J. STRICKLAND GOODALL of Middlesex Hospital seconded the vote of thanks which was carried with acclamation.

Sir JOSEPH FAYRER, in reply, said that knowing those who were concerned in the institute and those who were responsible for carrying on its work he was satisfied that its success and prosperity were assured.

After an inspection of the exhibits the proceedings terminated.

Obituary.

NIELS RYBERG FINSEN.

THE announcement of the death of Professor Finsen at Copenhagen on Saturday, Sept. 24th, at the early age of 43 years no doubt came as a surprise to many. Few were aware that his brilliant work had been carried on for years in a condition of chronic illness which would have paralysed the energies of most men. 20 years ago Finsen had an attack of rheumatic fever which seriously damaged the heart. For a long time the symptoms were ambiguous, hepatic enlargement and ascites being the most prominent features. Nearly five years ago, however, it was obvious to those who knew him that Finsen was a doomed man, and it was only by the frequent performance of paracentesis and the most careful regulation of his dietary and great self-denial that he was enabled to exist. In this condition he lived and laboured with a quiet heroism directing the work of the great Light Institute, the Mecca of lupus patients throughout the world.

A correspondent informs us that about a month ago Finsen returned from a visit to Rungsted, a little seaside resort in Zealand, near Copenhagen, without having derived the benefit which was hoped for from his stay there. Every time he spoke he was seized with a fit of coughing but nothing availed to break down his courage or to abate his interest in his work. Five or six days before his death he took to his bed and both he and his medical attendant, Dr. Flöystrup, recognised that the end was near. On the Saturday afternoon he sent for the staff of the hospital and took leave of them separately, pressing their hands and saying a few kind words of appreciation and thanks to each, looking the while perfectly calm and self-possessed himself. He died suddenly half an hour later, his wife and Dr. Forchammer, the head of the clinic, being with him. We are informed that the necropsy showed chronic pericarditis with calcification.

Niels Ryberg Finsen was born on Dec. 15th, 1860, at Thorshavn, the capital of the Färöe Isles. He was the son of Hannes Finsen, the governor of the islands. He passed some of his early years at school at Reykyavik in Iceland, his father being descended from an old Icelandic family. He studied at the University of Copenhagen for eight years and took his degree in medicine in 1890. In the same year he was appointed professor of anatomy in the Surgical Academy and held the appointment for three years. As a student he was only moderately successful in examinations and graduated in the second class. It is probable that this was largely owing to his attention being already specially directed to the influence of light upon living organisms, and it is said that this was caused by the observation that he found that he was able to work better in the well-lighted room of a fellow student than in his own. While holding the professorship of anatomy he was engaged in experimental work, and following the researches of Downes and Blunt on the influence of light upon bacteria and those of Widmark on the power of the actinic rays to cause inflammation of the skin he was led to a long series of investigations which demonstrated the value of light in the treatment of disease.

In 1893 he published his first essay on the red light treatment of small-pox. He argued that the blue and ultra-violet rays have an irritant action upon the vesicles of variola and that if they can be excluded many of the vesicles abort, pustulation is diminished, the secondary fever is consequently lessened, and scarring is slight and in some cases abolished. His second essay embodied a series of experiments on light as an irritant, a remarkable piece of work in which the influence of light upon animals of various classes was systematically investigated. Then came the publication of the treatise upon the treatment of lupus vulgaris by the chemical rays of light worked out in detail and showing a skilful adaptation of scientific principles to practical use in therapeutics. His next work was to render this valuable addition to the means of treating disease available for the sufferers from lupus. At first he found it difficult to obtain the necessary support, but in 1895, with the assistance of two wealthy Danes, Mr. Hagemann and Mr V. Jörgensen, he was enabled to open the first Light Institute at Copenhagen. The good work done led the State to grant a loan free of interest and the institute was resorted to by patients from all parts of the world and its removal to new and spacious premises became necessary. Over 2000 patients have been treated since the foundation. In addition to the large clinic a laboratory was established and a staff appointed to investigate the further development of phototherapy. The work done in the institute has been given to the world in a series of monographs in a special publication in Danish and German.

Finsen fortunately lived to see the success of his great work and early attracted the interest of the Royal Family of Denmark and particularly of Queen Alexandra. Her Majesty, when Princess of Wales, presented the apparatus to the London Hospital, and with the financial assistance afforded by Sir Alfred Harmsworth and others that hospital has been enabled to carry out the Finsen treatment in England, and already 450 patients have been under treatment there. Other hospitals have followed this example. Like most departures in therapeutics the light treatment was at first received with scepticism, but it has stood the test of time and every year adds to the number of patients successfully treated by its means. It has drawbacks, it is true; it is expensive and slow and is only applicable to the skin except in rare instances, but its results must always make the name of Niels Finsen honoured in the history of medicine. Finsen's personal qualities impressed all who came in contact with him. His intense devotion to his work, his constant struggle with rare courage against his physical disabilities, his modesty and total absence of self-seeking endeared him to all. When awarded the Nobel prize of 100,000 crowns (about £8000) he wished to give the whole sum to the Light Institute to carry on his great work and it was only with difficulty that his friends prevailed upon him to allow one-half to be placed at interest for the benefit of his family, the rest going to the institute.

Finsen was always a poor man. He had nothing but a small salary as the director of the institute and we are glad

PROFESSOR NIELS R. FINSEN

to learn that the Danish Government will confer a pension upon the family He leaves a widow and three children, one boy and two girls, the eldest eight years of age

DEATHS OF EMINENT FOREIGN MEDICAL MEN—The deaths of the following eminent foreign medical men are announced —Dr W R Pryor, professor of the diseases of women in the New York Polyclinic —Dr I Carbone, extraordinary professor of pathology in the University of Pisa, has died at Milan from the effects of Malta fever, upon the bacteriology of which he was working

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 7, 1826.

Although medicine even at an early period was more subdivided than it is at present, the distinction between physic and surgery, does not appear in the old writers who treat indifferently of both The separation of surgery, which then consisted of a few mechanical processes from physic, can only be traced to the 12th century At a time when the perversion and abuse of religion were deluging Europe with blood it was declared by a general council that the church abhors the shedding of blood—*ecclesia abhorret a sanguine* Thus the priests who were then nearly the sole possessors of medical as well as other learning left to barbers the performance of bleeding and other operations Perhaps surgery, as it then existed cannot be said to have been degraded by the alliance which, however, has lasted in some parts of Europe to the present day

The progress of anatomical knowledge has been marked by a corresponding advancement of surgery the epochs of the two sciences are the same Their most brilliant era in this country was that of the HUNTERS with whom POTT was coeval The impulse which these great men gave to medical science was not adequately sustained after their death, and the subsequent progress of anatomy and physiology must be looked for in other countries For a quarter of a century, we were nearly deprived of intercourse with the continent and knew very little about the state of medicine in FRANCE ITALY, and GERMANY The national conceit, and the mean opinion of foreigners, which this insulation engendered were encouraged and increased by those who ought to have known better Happily the cessation of war, by allowing renewed intercourse, has led us to a juster estimate of ourselves and our neighbours FRANCE and GERMANY have out stripped us in their establishments for medical education and in the opportunities of acquiring every description of professional knowledge

The most important period in French surgery was the establishment of the SURGICAL ACADEMY in the reign of LOUIS XV The ability and knowledge of its members may be estimated by the five volumes of its memoirs which are replete with valuable information JEAN LOUIS PETIT was one of its earliest members and a distinguished ornament of his profession DESAULT and BICHAT have successively flourished since, and claim our highest respect The career of the latter, although short was brilliant he displayed such a combination of mental energy and activity, of original genius and patient industry, that his early death loss which medical science His work on the membranes d his general anatomy, which astonish us as the productions of one who died at the age of thirty were only the precursors of a great design which he had conceived of remodelling the science of medicine

The reputation of the French in medical science is still amply sustained by a long list of living individuals whose talents and zeal are gratefully recognised by those who have benefited from their instructions I cannot help mentioning the gratification I have derived from the admirable anatomical work of M JULES CLOQUET, the *Manuel d Anatomie* now in course of publication and I strongly recommend it to your notice All parts of medical science are indeed cultivated by our ingenious neighbours with great zeal and an apparently disinterested love of knowledge They excel as anatomists and physiologists, they are close observers of nature, and have investigated very attentively the changes produced in the animal organs by disease Their knowledge is systematic and well arranged, and their elementary works excellent [1]

THE MIDWIVES ACT, 1902.

THE members of the Central Midwives Board met on Sept 29th at 6, Suffolk street, S W, Mr E P YOUNG being in the chair

A letter was read from a medical practitioner in the provinces complaining of the conduct of a registered midwife to whom he had written that it had come to his knowledge that she was interfering with his treatment of a child under his care and that if she continued to interfere he would take legal action The midwife replied "You can take legal proceedings whenever you like It is much like your 'impotence' (*sic*) to write to me so please to mind your own business if you know how The SECRETARY of the Central Midwives Board explained that he had written to the local supervising authority concerned asking for a report in accordance with Section 8 of the Midwives Act, 1902, but he had only receipt of his letter The Board decided ter until the report from the local supervising authority had been received

A letter was read from the secretary of the London Obstetrical Society informing the Board that after considering the case of a certain certified midwife the council had resolved that her London Obstetrical Society certificate should be forfeited The Board decided that evidence should be demanded in support of the charges against the midwife concerned

A letter from the medical superintendent of the Brentford Union Infirmary was read asking the opinion of the Board as to the best position for the building of new lying in wards The letter asked if it were likely that the educational value of the new lying in wards was likely to be affected by their being placed in the portion of the Brentford Union known as the workhouse or in the portion known as the infirmary

Dr W J SINCLAIR deprecated the Board taking any action by which it assumed any responsibility The question he said had absolutely nothing to do with the Board

The CHAIRMAN insisted on the necessity of careful consideration before the Board took up the position of architect

Miss J WILSON moved —

That the medical superintendent of the Brentford Union Infirmary be recommended to inspect the lying in wards of Kensington Infirmary

This was seconded by Miss D OLDHAM and carried by the votes of these two ladies against that of Dr SINCLAIR, who entered a strong protest against the Board assuming functions for which it was never intended

A letter from the Town Clerk of Poplar, urging the Board to promote legislation to empower local supervising authorities to grant compensation to midwives suspended from practice under Section 8 of the Midwives Act, was then considered

Dr SINCLAIR said that the Board had nothing to do with any question of compensation The duty of the Board was confined to administering the Midwives Act The duty of deciding on questions of compensation must rest with the courts of justice and it was absurd and illogical for the Central Midwives Board to discuss the subject The county councils and other authorities matter from the point of view tion He thought that some im take it up and as they had an enormous political force behind them many members of Parliament would be persuaded to interest themselves in the movement

On the motion of Miss WILSON seconded by Miss R PAGET and carried it was resolved that the secretary of the Central Midwives Board should be asked to take note of the suggestion about compensation Dr Sinclair's name was at his request entered on the minutes of the Board as objecting to this resolution

The consideration of a letter raising the question whether

[1] Excerpts from The Introductory Lecture to a Course of Surgery delivered by Mr Lawrence at the New Medical Theatre, Aldersgate-street.

certified midwives who only attended cases with medical men ought to notify their intention to practise was postponed.

After the SECRETARY had read the financial statement, Dr. SINCLAIR urged that in future the accounts should be made up seven days before the meeting of the Board and then printed and sent out with the agenda. Dr. Sinclair pointed out that it was difficult to discuss adequately figures read at the meeting.

At the request of the CHAIRMAN the SECRETARY then read Rule 18 regulating the proceedings of the Board as follows:—

At every ordinary meeting of the Board the secretary shall present a statement in writing showing the receipts and expenditure of the Board, including balances brought forward since the last ordinary meeting, and showing the existing balance, if any, to the credit of the Board and the existing liabilities.

Miss WILSON suggested that the Board should wait for the attendance of Mr. J. H. Johnstone.

Dr. SINCLAIR did not think it should be thought that the Board must wait for the attendance of Mr. J. H. Johnstone before deciding on such a common-sense matter.

After some discussion the CHAIRMAN ruled that the method followed by the secretary was according to the regulations.

The Board adjourned to Oct. 27th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8401 births and 4571 deaths were registered during the week ending Oct. 1st. The annual rate of mortality in these towns, which had been 17·5, 17·0, and 16·0 per 1000 in the three preceding weeks, further declined last week to 15·6 per 1000. In London the death-rate was 14·3 per 1000, while it averaged 16·2 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·4 in Hornsey, 7·5 in King's Norton, 7·9 in Willesden, 8·6 in Smethwick, 8·7 in Handsworth (Staffs.), 9·4 in Leyton, and 9·6 in Reading; while the highest rates were 21·0 in Stockton-on-Tees, 22·1 in Salford, 22·6 in Liverpool and in West Hartlepool, 23·3 in Blackburn, 23·5 in Sunderland, 23·6 in Blackburn, 25·7 in Wigan, and 26·5 in St. Helens. The 4571 deaths in these towns last week included 837 which were referred to the principal infectious diseases, against 1512, 1192, and 971 in the three preceding weeks; of these 837 deaths, 568 resulted from diarrhœa, 72 from diphtheria, 66 from measles, 45 from whooping-cough, 43 from scarlet fever, 42 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases occurred last week in Hornsey or in Handsworth (Staffs); in the other towns they caused the lowest death-rates in Bournemouth, Devonport, King's Norton, and Aston Manor; and the highest rates in Liverpool, Warrington, Bolton, Salford, Burnley, Blackburn, Preston, Hull, Stockton-on-Tees, and Sunderland. The greatest proportional mortality from measles occurred in Grimsby, Liverpool, and Tynemouth; from scarlet fever in Northampton and Huddersfield; from diphtheria in Portsmouth, Salford, Huddersfield, Stockton-on-Tees, and Swansea; and from diarrhœa in Warrington, Bolton, Burnley, Blackburn, Preston, Stockton-on-Tees, and Sunderland. The mortality from whooping-cough and from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Gateshead but none in any other of the large towns. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been five at the end of each of the two preceding weeks, had declined to three at the end of last week; no new cases were admitted during the week, against two, one, and none in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday last, Oct. 1st, was 2158, against 1816, 1929, and 1969 on the three preceding Saturdays; 406 new cases were admitted during the week, against 234, 340, and 284 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 129, 141, and 169 in the three preceding weeks, declined again last week to 167, but were five above the average number in the corresponding period of the preceding year. The causes of 45, or 1·0 per cent., of the deaths registered in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Newcastle-on-Tyne, and in 45 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Bootle, St. Helens, Blackburn, Preston, Halifax, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 15·7, 16·5, and 16·0 per 1000 in the three preceding weeks, rose again to 16·6 per 1000 during the week ending Oct. 1st, and was 1·0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 13·6 in Paisley and 14·8 in Edinburgh to 20·0 in Perth and 26·2 in Greenock. The 550 deaths in these towns included 58 which were referred to diarrhœa, 23 to whooping-cough, 11 to "fever," four to scarlet fever, four to diphtheria, and one to measles. In all, 101 deaths resulted from these principal infectious diseases last week, against 86, 103, and 87 in the three preceding weeks. These 101 deaths were equal to an annual rate of 3·1 per 1000, which was 0·2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 52, 69, and 60 in the three preceding weeks, further declined last week to 58, of which 28 were registered in Glasgow, nine in Edinburgh, nine in Dundee, four in Aberdeen, four in Leith, and three in Paisley. The deaths from whooping-cough, which had been 17, 13, and 17 in the three preceding weeks, further rose to 23 last week, and included 15 in Glasgow and five in Edinburgh. The fatal cases of "fever," which had been five, eight, and three in the three preceding weeks, increased again last week to 11, of which seven occurred in Greenock and three in Glasgow. The deaths from scarlet fever, which had been two, two, and three in the three preceding weeks, further rose to four last week, and included three in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 58, 55, and 66 in the three preceding weeks, further rose to 75 last week, but were 13 below the number in the corresponding period of last year. The causes of 12, or more than 2 per cent., of the deaths registered in these eight towns were not certified.

HEALTH OF DUBLIN.

The annual death-rate, which had been 20·8, 16·8, and 25·9 per 1000 in the three preceding weeks, declined again to 19·0 per 1000 during the week ending Oct. 1st. During the 13 weeks of the quarter ending on that date the death-rate averaged 20·7 per 1000, the rates during the same period being 16·4 in London and 14·7 in Edinburgh. The 138 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 50 from the number in the preceding week and included 19 which were referred to the principal infectious diseases, against 32, 17, and 34 in the three preceding weeks; of these, 16 resulted from diarrhœa, two from "fever," and one from whooping-cough, but not any from small-pox, measles, scarlet fever, or diphtheria. These 19 deaths were equal to an annual rate of 2·2 per 1000, the death-rates last week from the principal infectious diseases being 1·6 in London and 2·4 in Edinburgh. The fatal cases of diarrhœa, which had been 26, 14, and 28 in the three preceding weeks, declined again last week to 16. The 138 deaths in Dublin last week included 37 among children under one year of age and 27 among persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a marked decline from the respective numbers recorded in the preceding week. Eight inquest cases and five deaths from violence were registered, and 50, or more than a third, of the deaths occurred in public institutions. The causes of five, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING AUGUST, 1904.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING AUGUST, 1904

(Specially compiled for THE LANCET*)*

Cities and Boroughs	Estimated population in the middle of 1904	Notified Cases of Infectious Disease: Small pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers	Puerperal fever	Erysipelas.	Cholera.	Total	Annual rate per 1000 persons living	Deaths from Principal Infectious Diseases: Small pox.	Measles	Scarlet fever	Diphtheria.*	Whooping cough	Typhus fever	Enteric fever	Other continued fevers	Diarrhœa.	Total	Annual rate per 1000 persons living	Deaths from all causes	Death rate per 1000 living	Deaths of infants under one year to 1000 births
LONDON	4,643,950	4	1188	701	—	247	1	26	507	1	2678	6·0	2	154	31	53	104	—	30	—	2752	3125	7·0	8494	19·1	313
West Districts																										
Paddington	146,975	—	28	14	—	6	—	1	7	—	56	4·0	—	—	1	—	1	—	2	—	71	75	5·3	206	14·6	288
Kensington	179 236	—	20	17	—	3	—	1	12	1	54	3·1	—	1	—	1	2	—	1	—	77	82	4·8	262	15·2	332
Hammersmith	117 412	—	25	17	—	5	—	3	21	—	71	6·3	—	1	1	—	9	—	1	—	70	82	7·3	228	20·3	379
Fulham	152,482	—	19	20	—	5	—	1	21	—	66	4·5	—	1	—	2	7	—	—	—	130	140	9·6	313	21·4	372
Chelsea	74 329	—	4	3	—	2	—	1	6	—	16	2·2	—	—	—	1	5	—	—	—	25	31	4·3	120	16·8	277
City of Westminster	177,321	—	27	12	—	3	—	—	13	—	55	3·2	—	2	1	—	1	—	1	—	37	42	2·5	216	12·7	218
North Districts																										
St Marylebone	130 337	—	35	8	—	9	—	—	21	—	73	5·9	—	2	—	1	1	—	—	—	56	60	4·8	208	16·6	193
Hampstead	86,663	—	11	8	—	6	—	—	2	—	27	3·2	—	—	—	1	—	—	1	—	8	10	1·2	79	9·5	160
St Pancras	235,935	—	101	27	—	28	—	1	35	—	192	8·5	—	10	5	—	5	—	3	—	124	147	6·5	459	20·3	362
Islington	341 044	—	117	32	—	18	—	2	27	—	195	6·0	—	21	5	2	7	—	—	—	160	195	6·0	551	16·8	278
Stoke Newington	52 445	—	17	7	—	4	—	2	7	—	37	7·4	—	—	—	2	1	—	—	—	20	23	4·6	71	14·1	245
Hackney	226 266	1	78	54	—	26	—	1	27	—	187	8·6	—	5	—	6	2	—	3	—	165	181	8·3	417	19·2	352
Central Districts																										
Holborn	57 161	—	12	2	—	3	—	—	10	—	27	4·9	—	5	—	1	2	—	1	—	24	33	6·0	87	15·9	165
Finsbury	98 953	—	28	16	—	6	—	—	17	—	67	7·1	—	5	2	1	—	—	1	—	69	78	8·2	252	26·6	297
City of London	23 482	—	5	3	—	1	—	—	2	—	11	4·9	—	—	—	—	1	—	—	—	2	3	1·3	35	15·6	125
East Districts																										
Shoreditch	117 033	—	25	21	—	7	—	—	14	—	67	6·0	2	14	1	1	3	—	1	—	99	121	10·8	313	27·9	416
Bethnal Green	130 207	—	70	41	—	6	—	1	24	—	142	11·4	—	5	1	2	4	—	1	—	94	107	8·6	283	22·7	315
Stepney	303 791	1	130	119	—	26	—	—	71	—	347	11·9	—	10	4	11	6	—	2	—	201	234	8·0	650	22·3	318
Poplar	169 905	—	47	81	—	11	—	1	13	—	153	9·4	—	11	2	2	8	—	2	—	150	175	10·7	384	23·6	340
South Districts																										
Southwark	207,937	—	51	31	—	7	—	—	25	—	114	5·7	—	8	—	3	8	—	—	—	163	182	9·1	439	24·5	366
Bermondsey	129 397	—	24	18	—	8	—	—	21	—	71	5·7	—	6	2	2	2	—	3	—	117	132	10·6	297	23·9	337
Lambeth	310 359	—	43	25	—	14	—	3	22	—	107	3·6	—	16	1	3	15	—	—	—	172	207	7·0	546	18·3	282
Battersea	175 465	—	37	19	—	5	—	1	10	—	72	4·3	—	5	—	—	2	—	2	—	115	124	7·4	321	19·1	337
Wandsworth	257 448	—	43	25	—	5	—	—	19	—	92	3·7	—	7	1	2	1	—	—	—	148	159	6·4	420	17·0	300
Camberwell	268 384	1	58	16	—	15	1	4	32	—	127	4·9	—	7	1	1	5	—	3	—	165	182	7·1	470	18·3	320
Deptford	113 509	—	43	19	—	5	—	2	14	—	83	7·6	—	2	—	—	1	—	—	—	80	83	7·6	220	20·2	347
Greenwich	101 651	—	13	20	—	6	—	1	4	—	44	4·5	—	6	—	—	3	—	2	—	64	75	7·7	187	19·2	319
Lewisham	140,401	—	28	11	—	2	—	—	5	—	46	3·4	—	3	2	—	1	—	—	—	61	67	5·0	194	14·4	296
Woolwich	123 416	—	49	18	—	3	—	—	5	—	75	6·3	—	1	1	8	1	—	—	—	85	96	8·1	216	18·3	314
Port of London	—	1	—	—	—	2	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Including membranous croup

was equal to an annual rate of 6·0 per 1000 of the population, estimated at 4,648,950 persons in the middle of the year. In the three preceding months the rates had been 5·9, 5·4, and 6·1 per 1000. The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Lambeth, Wandsworth, and Lewisham; while they showed the largest excess in St. Pancras, Hackney, Bethnal Green, Stepney, Poplar, and Deptford. The notified cases of small-pox, which had been 87, 60, and 32 in the three preceding months, further declined to four, and included one each in Hackney, Stepney, Camberwell, and the district of the sanitary authority for the Port of London. The Metropolitan Asylums hospitals contained six small-pox patients at the end of August, against 118, 74, and 46 at the end of the three preceding months; the weekly admissions averaged one, against 23, 13, and eight in the three preceding months. Scarlet fever was slightly less prevalent during the month under notice than it had been during the preceding month; this disease was proportionally most prevalent in St. Pancras, Bethnal Green, Stepney, Deptford, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1632, 1599, and 1764 at the end of the three preceding months, had risen again to 1801 at the end of August; the weekly admissions averaged 214, against 219, 206, and 214 in the three preceding months. The prevalence of diphtheria showed a considerable increase over that recorded in the preceding month; among the various metropolitan boroughs diphtheria was proportionally most prevalent in Hackney, Bethnal Green, Stepney, Poplar, and Greenwich. The Metropolitan Asylums hospitals contained 818 diphtheria patients at the end of August, against 755, 681, and 763 at the end of the three preceding months; the weekly admissions averaged 119, against 113, 95, and 124 in the three preceding months. Enteric fever was more prevalent than in any previous month during the year; this disease showed the greatest proportional prevalence in St. Pancras, Hackney, Stoke Newington, Stepney, and Poplar. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 51, 62, and 67 at the end of the three preceding months, had increased to 135 at the end of August; the weekly admissions averaged 29, against ten, 12, and 15 in the three preceding months. Erysipelas was proportionately most prevalent in Hammersmith, St. Marylebone, Holborn, Finsbury, Bethnal Green, Stepney, and Poplar. The 26 cases of puerperal fever notified during the month included four in Camberwell, three in Hammersmith, three in Lambeth, and two each in Islington, Stoke Newington, and Deptford.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending Sept. 3rd the deaths of 8494 persons belonging to London were registered, equal to an annual rate of 19·1 per 1000; in the three preceding months the rates had been 13·9, 12·5, and 13·6 per 1000 respectively. The lowest death-rates in London during the month under notice were 9·5 in Hampstead, 12·7 in the City of Westminster, 14·1 in Stoke Newington, 14·4 in Lewisham, 14·6 in Paddington, 15·2 in Kensington, 15·6 in the City of London, and 15·9 in Holborn; the highest rates were 22·3 in Stepney, 22·7 in Bethnal Green, 23·6 in Poplar, 23·9 in Bermondsey, 24·5 in Southwark, 26·6 in Finsbury, and 27·9 in Shoreditch. The 8494 deaths from all causes included 3126 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 154 from measles, 31 from scarlet fever, 53 from diphtheria, 104 from whooping-cough, 30 from enteric fever, and 2752 from diarrhœa. The lowest death-rates from these diseases were recorded in Kensington, Chelsea, the City of Westminster, St. Marylebone, Hampstead, Stoke Newington, and the City of London; and the highest rates in Fulham, Shoreditch, Poplar, Southwark, Bermondsey, and Bethnal Green. The two fatal cases of small-pox both belonged to Shoreditch. The 154 deaths from measles were 17 below the average; among the various metropolitan boroughs this disease was proportionately most fatal in Islington, Holborn, Shoreditch, Poplar, and Greenwich. The 31 fatal cases of scarlet fever were less than one-half of the average number in the corresponding periods of the ten preceding years; the highest proportional mortality from this disease was recorded in St. Pancras, Islington, Finsbury, Stepney, Poplar, Bermondsey, and Lewisham. The deaths from diphtheria numbered 53, the corrected average number being 162; among the various metropolitan boroughs this disease was proportionately most fatal in Stoke Newington, Hackney, Holborn, Stepney, and Woolwich. The 104 fatal cases of whooping-cough showed a decline of 38 from the average number in the corresponding periods of the ten preceding years; the highest proportional mortality from this disease occurred in Hammersmith, Fulham, Chelsea, Poplar, and Lambeth. The 30 deaths referred to enteric fever were 27 fewer than the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, St. Pancras, Hackney, Holborn, Bermondsey, and Greenwich. The 2752 deaths from diarrhœa were 1240 in excess of the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease was recorded in Fulham, Hackney, Shoreditch, Poplar, Southwark, Bermondsey, and Deptford. In conclusion, it may be stated that the aggregate mortality from these principal infectious diseases was nearly 49 per cent. above the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 313 per 1000. The lowest rates of infant mortality were recorded in the City of Westminster, St. Marylebone, Hampstead, Stoke Newington, Holborn, and the City of London; and the highest rates in Hammersmith, Fulham, St. Pancras, Hackney, Shoreditch, and Southwark.

THE SERVICES.

ROYAL NAVAL VOLUNTEER RESERVE.

THE undermentioned has been appointed Surgeon:—Elliot Wilson Woodbridge (dated Sept. 27th, 1904).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. T. Johnston, Acting Principal Medical Officer at Belfast, is ordered to Canterbury to take up duty there. Major E. McK. Williams is posted to the Home District for duty. Major H. A. Cummins, C.M.G., is held in readiness for service in India.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: The undermentioned Lieutenants to be Captains:—G. H. Edington (dated Oct. 5th, 1904), M. Dunning (dated Oct. 5th, 1904), S. M. Sloan (dated Oct. 5th, 1904), H. W. Thomson (dated Oct. 5th, 1904), A. Young (dated Oct. 5th, 1904), and F. J. Charteris (dated Oct. 5th, 1904). The London Companies: The resignation of Major T. H. Openshaw, C.M.G., which was announced in the *London Gazette* of Sept. 2nd, 1904, is cancelled. Devon Bearer Company: Captain H. W. Webber resigns his commission (dated Oct. 5th, 1904).

ACCIDENT TO SURGEON-GENERAL J. A. CLERY.

A serious accident occurred to Surgeon-General J. A. Clery, C.B., A.M.S., medical officer of the 2nd Army Corps, belonging to the headquarters staff at Salisbury, who, in company with Colonel Heath, was returning home from a cycle ride in the neighbourhood of Salisbury on Sept. 26th. When nearing home he was thrown from his bicycle and run over by a motor-car. Assistance was at once rendered and Surgeon-General Clery was conveyed home by motor-car, when it was found that he had sustained a fracture of three ribs and some scalp wounds; it is also feared that the spine has received some injury.

DEATHS IN THE SERVICES.

Brigade-Surgeon William Ashton, A.M.S. (retired), recently, at his residence, Marlborough Lawn, Cheltenham, in his seventieth year. He entered the medical service of the army in 1857 and served in the Indian Mutiny campaign of 1858–9 and was present with the 79th Highlanders at the storming and capture of Rampole Cassie and the passage of the Gogra at Fyzabad, and with the 53rd Regiment at the action of Toolsepore (Indian medal). He retired from the army in 1888.

Brigade-Surgeon Edwin Wilson, A.M.D. (retired), suddenly on Sept. 27th, aged 78 years. He became assistant surgeon in 1855 and reached the rank of surgeon in 1868, surgeon-major in 1873, and retired in 1884 with the honorary rank of brigade-surgeon. He served in the 71st Highlanders with the Central India Field Force under Sir Hugh Rose in

1858 and was present at the battles of Koonch and Golowlee the capture of Calpee, the action of Morar, and the recapture of Gwalior He was also in medical charge of the flying column which was sent in pursuit of Burgore Sing (medal with clasp)

Surgeon Henry Edward Rayer, R N at the Royal Naval Hospital, Malta on Sept 27th, from Mediterranean fever aged 30 years He joined the Medical Service of the Royal Navy in 1898 and has served in the *Ulean* since 1901

THE VOLUNTEER REGULATIONS

A new addition of the Volunteer Regulations has been published in which there are several changes affecting Volunteer medical officers A step of honorary rank has been authorised for medical officers who have completed 20 years service, time spent on active service counts double towards this A new examination has been added for surgeon captains and captains, R A M O V before promotion to surgeon major Officers who served in South Africa as surgeon captains or captains are exempt from this examination Forage allowance is now granted to mounted officers in camp In the Regulars staff uniform has been abolished for all officers below the rank of colonel and accordingly in future senior medical officers of Volunteer infantry brigades will wear regimental uniform but the present staff dress may be worn out The formation of brigade bearer companies has been suspended for the present

A SANITARY DEPARTMENT FOR INDIA

An important resolution of the Government of India has been published announcing the formation of a separate sanitary department for India with a central laboratory at headquarters and a provincial laboratory in each of the larger provinces

THE WAR IN THE FAR EAST

Whether the absence of news from the belligerent forces in the field in Manchuria is to be taken as an indication that a forward movement on the part of the Japanese armies is taking place or about to take place and that consequently the censorship is again in full operation we know not but there has been a suspension of all news from this direction As regards Port Arthur matters apparently remain much as they were Despite fierce and repeated attacks on the part of the besiegers the fortress has not fallen

The Russian forces actually in the field are officially reported to be healthy and General Kuropatkin writing to the Ministry of War, has spoken in highly eulogistic terms of the Russian commissariat service for the way in which its officials have supplied his army with provisions amid a host of difficulties of all kinds All the troops we are told, have nearly always been supplied with bread prepared in portable field kitchens, this explains the fact that the army has not had to suffer from dysentery in spite of the execrable climatic conditions The men of the supply corps follow the troops up to the very outposts It is needless to point out how absolutely dependent an army in the field must be upon its food supply and if the Russian commissariat have been able to fulfil their part in this respect under the extremely difficult circumstances which have arisen in this campaign it most deservedly merits the highest possible credit On the other hand we fear that the Japanese armies whose food mainly consists of rice which is insufficiently nourishing for soldiers in the field in a cold weather campaign have frequently had to march and to fight in advance of their food supplies There is but little doubt, as we have previously stated that beri beri is a prevalent complaint among the Japanese soldiers and that it is so in the Manchurian army now

According to unofficial but fairly trustworthy estimates the number of sick and wounded soldiers under treatment in Japan towards the end of last month may be taken as about 45 000 the military hospitals in Tokio Osaka and Hiroshima contain 10,000 patients each 9000 have sufficiently recovered to be sent to the mountain health resorts The system of handling and treating the sick and wounded is working satisfactorily and the death rate is declared to be exceptionally small

The total casualties on both sides since the battles of Yalu and Kinchow—that is in the past five months and exclusive of the operations at Port Arthur—have been estimated by a special war correspondent of the *Standard* as amounting to 125 000 counting all the killed sick, wounded and missing The sick and missing on the Russian side, according to this calculation, are reckoned as 30,000, whereas they are taken as only 10 000 on the Japanese side, which can scarcely be the case The truth is that all such estimates are untrustworthy It is comparatively easy however, to count the number of patients present in war hospitals

At Mukden there is a good deal of distress prevalent The Scottish Mission, with a hospital under the care of Mr D Christie is doing good work in that neighbourhood among the refugees It supports 500 of these in the mission compounds and about 100 receive surgical treatment daily About 5000 were recently stated to have been relieved in the course of three days The weather is reported to be cold and windy, the cold having prematurely set in and strenuous efforts are being made on both sides to supply the troops with warm clothing Both sides have also been hurrying up reinforcements for the coming battle and especially on the part of the Russians who have managed to carry out some increased railway facilities for the purpose and for the transport of stores points at the present

The *T* ticle on the war says The Russian Red Cross Society is a body possessing large resources and great influence in high quarters Up to July 15th it had sent 138 hospitals to the front, with 15 000 beds 400 doctors 1750 attendants, and 800 sisters of mercy Many of the best Russian families have sent one member or more to aid in this beneficent and charitable work, in addition various officials on leave have spent weeks at the seat of war

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Correspondence.

Audi alteram partem

SOME POINTS IN THE PREVENTION OF EPIDEMIC DIARRHŒA

To the Editors of THE LANCET

SIRS—I reply with pleasure to "Practitioner's" query in THE LANCET of Oct 1st p 981 Before doing so I must state plainly (what I had hoped was already sufficiently clear in my last contribution to your columns) that of course I do not attribute every case of diarrhœa to infection by dust or flies It is also important to bear in mind the distinction between diarrhœa as a *symptom* and epidemic or zymotic diarrhœa as an infectious disease A study of the returns of deaths from diarrhœa in London shows that, generally speaking from December to June there is a rough average of 12 deaths a week in London from diarrhœa There can be but little doubt that the majority of these deaths (which of course represent a much larger number of cases) during the winter and spring months arise independently of fly or dust infection We might I think, legitimately term this the normal amount of diarrhœa in London due to other causes than flies or dust It is obvious therefore, that at least an equal number of cases during the summer months is equally independent of these infective agents

"Practitioner" asks if I can explain why so many breast fed infants are suffering from diarrhœa now" I assume he means zymotic or epidemic diarrhœa Perhaps I can best reply by asking questions 1 Are these cases *wholly* breast fed or is the breast supply supplemented by one or more meals of other food in some cases? 2 Are the instructions as to cleansing of nipples before and after feeding *scrupulously* carried out? 3 Do the instructions extend to cleanliness of the mother's hands and finger nails? (The nipple is frequently held by the mother to assist the infant in feeding) 4 Are dummy teats absolutely forbidden? Many breast fed infants are given these abominations to keep them quiet between times These often fall on the dusty pavements outside or on the germ laden carpet indoors and (as I have seen) are often replaced in the infant's mouth without even a pretence at wiping, or if an attempt is made the teat is usually rubbed on the mother's skirt or bodice which cannot improve matters for these garments are obviously liable to pollution in various ways including pollution by the infant himself 5 Are flies prevented from settling on the infant's lips when asleep? Germ laden flies may thus directly deposit diarrhœa causing organisms at the portal to the alimentary system 6 Are any of these infants allowed to crawl about the floor? If so how easily diarrhœa causing organisms, brought in by boots, &c, may be carried to the mouth

REBOUND

In all these ways (and no doubt many others) diarrhœa-causing organisms may be introduced into the alimentary systems of even wholly breast-fed infants, and I venture to think (after excluding cases arising from dietary errors or drugs through the mother) that such methods of infection probably account for most of the cases of diarrhœa occurring among wholly breast-fed infants. One point is clear from careful investigation into numerous deaths from infantile diarrhœa in many towns—viz., the incidence of fatal diarrhœa among wholly breast-fed infants is almost a negligible quantity, as compared with the enormous death-roll from this disease among bottle-fed infants. Thus in my own district 63 cases of diarrhœa occurred among infants under two years of age during August, 1904. Only one of these 63 cases was in a wholly breast-fed infant and in this instance the standard of home hygiene was by no means satisfactory.

I have calculated from various data which I have collected from the reports of other medical officers of health that the normal average death-rates of infants under 12 months of age in large urban districts may be stated as follows:—

—	Death-rates per 1000 births— From all causes.	From diarrhœa.
Breast-fed infants...	85	18
Infants fed wholly or partly on artificial milks	140	92
Infants fed wholly or partly on cow's milk	178	118

I have assumed as approximately correct in making these calculations that 60 per cent. of infants are breast-fed; 20 per cent. are fed wholly or partly on cow's milk; and 20 per cent. on artificial milks.

Epidemic diarrhœa is a disease of a fulminating type revealing in its characters the results of an infective process of a massive nature. Professor S. Delépine thinks that the massive infection of milk takes place chiefly through careless methods of milking at the cowsheds. No doubt many cases are due to primary infection in this manner. But whether such primary pollution is present or not I maintain that an increasing amount of pollution of a dangerous nature is continuously occurring at the farms, in the dairy, and even in the home of the consumer through the agency of dirt-carrying flies. In warm weather such pollution is rendered incredibly massive by the very rapid multiplication of bacteria in milk, whether introduced by dirty cows, dirty milkers, dirty flies, dust, or all combined. In any case I have observed that when flies are fewer in numbers then also the diarrhœa deaths diminish and *vice versâ*.

In investigating the etiological factors in epidemic diarrhœa the following points demand consideration. 1. During a hot dry summer various parts of a large town are obviously subject to almost the same influences of solar heat, ground temperature, and other climatic conditions (excepting towns situated partly on hills and partly in valleys). The same milk vendors supply mixed milk from the same sources to rich and poor districts alike and grocers supply the same brands of condensed milk in all parts of the town. Although, then, there may be no appreciable difference either as regards meteorological conditions or food supplies, yet the infantile mortality from diarrhœa during the hot months will be found to be more severe in certain parts of the town as compared with others. It will be found that the affected districts are those which surround or are in the proximity of organic matter, such as refuse tips, midden privies, stables, rag and bone stores, slaughter-house, &c. Why? 2. Under similar climatic conditions and food-supplies one poor part of a town compares favourably with another equally poor subdistrict. Why? 3. If from the death returns for London for many years past the diarrhœa mortality be studied through the weeks and months of the year and a curve constructed, it will be found that the diarrhœa curve maintains a fairly dead-level or low-water mark of an average of 12 deaths a week from December to the beginning of June; in the third week of June the number of deaths from diarrhœa has multiplied about four times, or an average of 50 deaths a week. Thereafter the curve rises very rapidly week by week, so that the weekly mortality has multiplied eight times by the first week in July, while by the third week in July the average number of deaths from diarrhœa is no less than 16 times the average weekly number of deaths from diarrhœa from December to June. The diarrhœa curve remains at this high level or high-water mark until August is well advanced when it gradually begins to fall, so that by the end of August the weekly number of deaths is about 13 times as many as from December to June. Thereafter the fall in the curve is rather more rapid, the number of deaths from diarrhœa during the middle week of September being now only eight times the multiple of the December to June average, dropping to half this number by the beginning of October. As the rise in the curve began gradually so it ends, reaching low-water mark of about 12 deaths a week towards the end of November.

The diarrhœa curve for London thus demonstrates that epidemic diarrhœa begins gradually in June, rapidly rises to a zenith in July and August, remains at a high level until near the middle of September (with, however, a tendency to decline after the third week in August, this tendency becoming more pronounced during the latter half of September and beginning of October), thereafter finishing by lysis towards the end of November. Why is this? It is necessary to study each problem and series of facts more closely. 1. As regards proximity to organic refuse, midden privies, &c., these conditions obtain all the year round; moreover, dry and dusty weather often occurs in March without materially affecting the infantile mortality from diarrhœa in this month. It is not until flies begin to come in and gradually increase in numbers that the diarrhœa curve begins to rise, at first gradually, then more rapidly, and so forth. 2. As regards one poor district comparing favourably with another during the same season, it will generally be found that the district more severely affected also suffers from a greater abundance of flies and the proximity of larger quantities and more offensive organic material. Such circumstances are favourable to the breeding of large numbers of flies and of each fly bearing a considerable quota of filth to food. 3. As regards the gradual rise in the diarrhœa mortality, at first in June, then the rapid ascent in July, the high level maintained through the greater part of August, the gradual fall at the beginning of September, the rapid fall towards the end of September, the final slow decline to the end of November, does it not correspond closely with the actual fly season? Seen in small numbers in June, gradually increasing in force until they come in with a rapid rush in July in large numbers, voracious to a degree until sexually mature, towards the end of August their attention gradually turns to sexuality rather than to food. Though still in considerable numbers they settle less on food. A chilly day in September soon makes a noticeable difference in their numbers but they are still evident (particularly in the kitchen) in diminishing numbers until November is well advanced.

I advanced this suggestion—that the seasonal incidence of diarrhœa was largely the result of the seasonal prevalence of flies—at a conference of medical officers of health in Essex in November, 1902, and again in a communication[1] I made to the Epidemiological Society of London in April, 1903. Further observation confirms me in the belief that the rôle played by the domestic fly in the *seasonal* incidence of diarrhœa has been very much underestimated. I inclose a copy of a special report on epidemic diarrhœa which gives some facts of interest as regards the incidence of this disease in Southend. In my opinion Dr. A. C. Rendle is more than probably correct in attributing much of the high infantile mortality in Liverpool to the fly-breeding, insanitary, open brick middens which, he says, still persist throughout the city, but corporations can move only slowly and it will take time to rid Liverpool of all these abominations. In the meantime, as a lesser evil, Dr. T. R. Bradshaw appears to advocate the use of preservatives in food. The methods of prophylaxis which are more commendable are, in my opinion, insisting on milk purveyors refrigerating all milk and urging on all purveyors and consumers the necessity for keeping all food supplies covered over with suitable covers to protect from flies and dust. Still Dr. Bradshaw's contention is not one to be dismissed without due consideration, though it is difficult to see how the addition of preservatives to food can be permitted as a trade procedure without incurring the risk of dishonest purveyors foisting stale articles on the public.

[1] Transactions of the Epidemiological Society, N. S., vol. xxi, p. 128. Brit. Med. Jour., Sept. 17th, 1904, and previous number.

Another serious objection is that the permission of the addition of preservatives would not tend to raise the standard of cleanliness either on the part of the purveyors or consumers I am, Sirs, yours faithfully,

J I C NASH, M D Edin, &c,
Oct 4th, 1904 Medical Officer of Health Southend-on Sea.

DEATHS FROM CHLOROFORM AND THEIR PREVENTION

To the Editors of THE LANCET

SIRS —I feel sure that Mr C Hamilton Whiteford has hit the nail on the head when he says that the preference for chloroform among practitioners of many years' standing is really a case of "Hobson's choice" There is no doubt that a large percentage of practitioners do not know how to anæsthetise a patient with ether I would even go further and say that many of them do not know how to give gas (nitrous oxide) and have not even handled a gas bag In the surgeries of many practitioners the nitrous oxide cylinders are conspicuous by their absence

Now why is there this dearth of really capable anæsthetists? Probably because every medical man considers himself capable of giving anæsthetics But surely every man who gives chloroform is not an anæsthetist The reason for this is the lack of interest taken by practitioners in anæsthetics Ask any general practitioner about anæsthetics Offer him a book to read on the subject

'Anæsthetics don't interest me

and yet how important a function

thetics is The indiscriminate use of chloroform in any operation leads to such a disaster as happened about 18 months ago in this town—namely the death of a child under chloroform while being operated on for enlarged tonsils and adenoids

Dr A D Waller before the British Medical Association in 1897 said "I am greatly astonished that chloroform should in the face of the clinical experience of the last 50 years still be used in minor surgery And yet still it is How are we to alter this? There is no doubt we must educate the older practitioners They should be

giving ether in preference to

have post graduate classes in [illegible] They should [illegible]

taught the way to give nitrous oxide, ether ethyl chloride &c All hospitals in provincial towns or in incorporated boroughs should have anæsthetists of repute attached to the operating theatre and dental department They should be allowed the liberty of holding classes for neighbouring practitioners where the principles involved in administering each anæsthetic could be taught Then the death rate not only of chloroform but of every anæsthetic would diminish both to the advantage of the public and the profession as well With regard to ethyl chloride, it is most suitable for minor surgical operations (removal of tonsils and adenoids, opening and scraping abscesses &c) It is very portable I have been so pleased with it that I intend in future to use it always in preference to gas for minor surgery

I am Sirs, yours faithfully,

Croydon Oct 1st 1904 ROBERT HENDERSON

THE BOILING OF MILK

To the Editors of THE LANCET

SIRS —May I protest against Dr Forbes Ross's proposal to add another proprietary food to the enormous number already in existence? Many of the statements in his letter are distinctly controversial, though it is not worth while to discuss them at length I should like, however to suggest that although he has not met with cases of scurvy in infants due to boiled milk it is a fact which can be vouched for by numerous authorities on infant feeding that this affection may follow the *prolonged* use of pasteurised, boiled, or sterilised milk The cases are more common among the better classes for the reason that such precautions are more rigorously adopted than among the poor Among the latter scurvy is not often produced in this way for the evil effects of boiling milk as regards destroying its anti scorbutic properties are largely counteracted by giving the infant various tastes of other articles of diet Scurvy in the infants of the poor is much more usually due to the use of condensed milk or to some one or other of the proprietary foods, dependent chiefly for their nutritive value on milk evaporated down to a varying degree of consistence or to actual dryness

The virtues claimed for the suggested milk powder are as numerous, and no doubt as valuable as those of most of the proprietary foods so largely advertised To the average mind it hardly seems credible that "pure milk can be made from it" Surely a solution of a milk powder can never resemble pure milk The purity of the powder might not be all that is claimed for it What guarantee is there that the milk from which it is prepared is clean fresh milk, devoid of bacterial contamination and the products of microbial life? That such a powder might be used with impunity and even with advantage in some cases is no doubt true The same may be said with equal truth of other powders prepared from milk for this is no new departure in the preparation of milk foods

As long as the medical profession adopts the same line of action as Dr Forbes Ross and recommends proprietary foods, new or old, for the preventive treatment of infantile diarrhœa so long will it be difficult to establish the true means of preventing such outbreaks Improvement in the hygienic surroundings of the infant and education of the mother in the methods of preserving food (without the addition of chemical preservatives) and in the proper methods of preparing the food and feeding the child are factors of the utmost importance But, in addition, the mother must be able to obtain a supply of pure fresh, clean milk free from an undue amount of microbial contamination and chemical preservatives Put shortly, we must endeavour to abolish our obsolete methods and to obtain a complete reorganisation of the milk supply —I am Sirs yours faithfully,

Upper Brook street W Oct 3rd 1904 EDMUND CAUTLEY

To the Editors of THE LANCET

SIRS —Mr R Bevan's letter in THE LANCET of August 27th has given rise to some discussion, many opinions, a little theorising and a good deal of philosophic doubt As one who pointed out some of the causes of the list named may I again occupy a little of your space with the statement of a few of those *useful articles—facts? The question as to the* boiling of milk to be used for infants is part of the general question of how infants may best be fed artificially Now, setting aside the question of percentages as not relevant to the present discussion the following propositions sum up what we know for certain about infant feeding 1 Grave digestive disturbances are often produced by using a food containing a large amount of insoluble carbohydrate This disposes at once of the majority of 'patent' foods A list and analysis of these are given by Dr R Hutchison[1] 2 Grave nutritional disturbances are very likely to occur by the use of a food very deficient in proteids or fats This disposes of desiccated foods at any rate when only to be mixed with water unless the preparation is only intended to be used for a very short period Dr F W Forbes Ross in his interesting letter in THE LANCET of Oct 1st does not give the composition of his dried milk but most dried and condensed milks are very deficient in fat 3 "Summer diarrhœa is largely due in this country at any rate to the spore bearing peptonising bacilli of Flugge which can only be destroyed by very prolonged heating 4 Milk which has been manipulated artificially causes in a certain rather small proportion of cases the symptoms of infantile scurvy Holt's statistics[2] go to show that the more heating and manipulation the milk undergoes the more likely it is to cause infantile scurvy Merely pasteurised milk was only responsible for three cases while sterilised milk (boiled for one hour) gave *rise to* 107 5 Prolonged boiling profoundly alters the subtler physiological properties of milk Scurvy only seen in a few cases must be regarded as an intense reaction due to some special idiosyncrasy of the patient This idiosyncrasy has its gradations and in some few cases is manifested when only slightly altered milk is used while in a large number of cases much more alteration in the milk is necessary There is a yet larger number of cases in which even 'patent' foods do not give rise to scurvy but it does not follow from this that by feeding an infant on much altered milk we are not depriving him of many substances which are very necessary to his proper development

The facts show that children should be fed on milk and

[1] Food and Principles of Dietetics, second edition, p. 446.
[2] Diseases of Infancy and Childhood, second edition, p 243

not on proprietary foods or dried products; that if the milk is not boiled for a long time during four months in the year it cannot be used (except immediately) without great risk of diarrhœa; that if it is so boiled there are a certain, but not large, risk of producing scurvy and a much larger risk of interfering with the infant's health in a less obvious manner. It is unscientific to run either of these risks. There is only one true solution of the problem—to use a perfectly pure, clean milk and to keep it in sterile, closed vessels at a low temperature. This, however, is a counsel of perfection. In the meantime there is a counsel of imperfection—namely, to pasteurise the milk and to keep it under the conditions above indicated. For the classes who can hardly be expected to do this the only plan is to provide infant milk depôts and to teach them their value.

I will not enter into the question of preservatives. We have not yet at our command a sufficient number of observations and so I shall content myself with calling Mr. Cecil Revis no harsher name than "somewhat previous."

I am, Sirs, yours faithfully,

J. M. FORTESCUE-BRICKDALE, M.A., M.D. Oxon.

Clifton, Bristol, Oct. 1st, 1904.

To the Editors of THE LANCET.

SIRS,—I desire to reply as briefly as possible to the letter of Dr. F. W. Forbes-Ross, which appeared in THE LANCET of Oct. 1st, p. 979. He considers the question of boiled milk and scurvy "the classical example in medical circles of 'a little knowledge being a dangerous thing.'" May I remind him that it is precisely those who have devoted most attention to the scientific aspects of infant feeding who are responsible for the contention that the boiling of milk gives rise to scorbutus. I will quote but one authority—Dr. L. Emmett Holt: "How great was the danger of scurvy from a prolonged use of sterilised milk as a diet was first prominently brought out by an investigation into the causes of scurvy by the American Pediatric Society. Sterilised milk was the previous diet in 107 of the 379 cases in this report, being second in importance only to the proprietary infant foods. ..... Again and again cases have been cured by simply changing the diet from sterilised to raw milk, so that there seems to be no escape from the conclusion that the heating really produced the disease."[1] I hope that Dr. Forbes-Ross does not include Dr. Holt among those whose "little knowledge is a dangerous thing." He states that in 15 years he has never seen a case of "scurvy rickets" due to boiled milk. But scorbutus in infants frequently results from a diet of boiled milk and I am constantly seeing cases.

In my "Nutrition of the Infant" I have devoted considerable attention to this subject and, without desiring to claim any degree of infallibility, I venture to think that the facts discussed in the chapters on "The Heating of Milk and the Resulting Changes" and "Scorbutus" are not to be got over by dogmatic statements in regard to the incidence of such a curious disease as "scurvy rickets." I would ask those interested in the question to read the report of my evidence before the Inter-departmental Committee on Physical Deterioration. For one of the members of the committee began his examination with the question—"Will you think me troublesome if I ask you to go categorically over what you have said to us?" But Dr. Forbes-Ross is not content with boiled milk. He recommends the use of dried cow's milk dissolved in water. It is really distressing that so many members of the profession will so persistently refuse to really consider the extreme importance of the food of the infant in regard to structure and development. He gives 15 reasons for advocating the use of this powder. I will content myself with a single objection. It is not a *food* for infants. And in connexion with this I would refer him to my letter published in THE LANCET of July 16th, 1904, p. 173. In hospital and private practice I have had a great number of infants under my care. Not one of them has developed zymotic enteritis or anything like it. Not one of them has been fed on "boiled" or "sterilised" milk. The difficulties of meeting the requirements of the infants among the poorer classes are serious. But we shall not succeed in surmounting these difficulties by ignoring them.

I am, Sirs, yours faithfully,

Harley-street, W., Oct. 1st, 1904. RALPH VINCENT.

[1] "Recent Progress and Present Problems in Pediatrics." An address delivered before the Cleveland Medical Society, Oct. 26th, 1900.

AXIS TRACTION FORCEPS.

To the Editors of THE LANCET.

SIRS,—There appears in Dr. G. E. Herman's work, "Difficult Labour," Chapter XXV., in the section *re* forceps describing the mode of attachment of the traction rods: "Theoretically they *should* be attached opposite the equator of the head, but this is opposite the middle of the fenestræ." It has occurred to me for some time that this could be accomplished by means of a transverse rod with roundel edges and surface, joining the two sides of the blades crossing the middle of the fenestræ, the traction rods to be attached to their centres and able to be detached for cleansing purposes, and the traction rods to be attached to the outer sides as in Dr. C. J. Cullingworth's forceps. In order to make the instrument light the handles should be made of aluminium. I shall be glad of your opinion.

I am, Sirs, yours faithfully,

R. E. W. JENNINGS, M.R.C.S. Eng., L.R.C.P. Lond.

Grays, Essex, Sept. 24th, 1904.

*** We think that the apparatus is feasible but that it presents certain disadvantages of which the most notable are (1) pressure on the head, and (2) the liability of the head to bulge into the fenestræ.—ED. L.

LAYMEN AND ELECTRICAL TREATMENT.

To the Editors of THE LANCET.

SIRS,—If you are not too weary of this correspondence perhaps you will allow me to complete up to date the history of the patient with exophthalmic goitre referred to by me in THE LANCET of Sept. 17th. She subsequently got very marked and lasting benefit as the apparent result of about three months' treatment by the constant current, administered, alas, by her own mother.

I am, Sirs, yours faithfully,

Wimpole-street, W., Oct. 5th, 1904. E. STANLEY SMITH.

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

To the Editors of THE LANCET.

SIRS,—I have read your annotation on the above in THE LANCET of Oct. 1st, p. 961. I have also seen published in other journals accounts of the incident to which you allude. There is one point which has not been touched on in any of the reports I have seen. The juryman asked the coroner if the employment of the "pathologist and toxicologist" in question meant any extra expenditure and the coroner replied that no additional expense would be incurred thereby. If the coroner is correctly reported he said what he should have known was untrue. The staff of a hospital supported by voluntary contributions receive no fee for post-mortem examinations nor for their subsequent attendance at the inquest. The introduction, therefore, into the case of the "pathologist and toxicologist" is an extra expense to the ratepayers.

I am, Sirs, yours faithfully,

Oct. 5th, 1904. CORONER.

CHARITY VOTING REFORM.

To the Editors of THE LANCET.

SIRS,—Having been very busy I have only just read Mr. Sturges's letter in THE LANCET of Sept. 10th, p. 793. Will he kindly state what the effect has been on the incomes of the various institutions he names? Has the abolition of the voting system increased or diminished the incomes?

I am, Sirs, yours faithfully,

Oct. 2nd, 1904. A CONSTANT READER.

TRIALS OF SMALL MOTOR-CARS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 24th an annotation appeared under the above heading in which you state that the cars in the Hereford trials were arranged in four classes according to price, varying from £150 to £200. I beg to inform you that five cars competed costing less than £150,

three of them costing £125 and under, and one of these came out very well in the judges' report

I am, Sirs, yours faithfully,

J H

*** Our note on the trials was necessarily brief The car referred to by our correspondent is evidently the "Speedwell"—ED L

MEDICAL NOTES FROM THE FAR EAST.

(FROM A SPECIAL CORRESPONDENT)

(Continued from p 984.)

ON August 7th, at Sasebo, by the kindness of Surgeon-General Totsuka, F R C S Eng, of the Imperial Japanese Navy, I had an opportunity of going over the hospital ship *Saikio Maru*, accompanied by Dr H Sonobe, who, having spent three years at Johns Hopkins Hospital at Baltimore and at Philadelphia, speaks good English and now after nine years' service ranks with a first lieutenant in the navy The Japanese navy employs two hospital ships, the *Kobe Maru* and the *Saikio Maru*, which ply alternately between the fleets, chiefly Admiral Togo's fleet before Port Arthur, and the chief naval base at Sasebo A small proportion of cases only are drafted on to the newer red brick hospital at Kuré, an hour s journey south from Hiroshima on the Inland Sea The epithet "maru," meaning literally "round, is applied to all non-combatant ocean going ships, whether employed by Government or by private firms These hospital ships are entirely independent of the military medical service and Red Cross, which take their sick to Hiroshima instead of Sasebo, but are, like them, chartered and fitted up for their present use only during active service By good fortune the *Saikio Maru* arrived at Sasebo on the same day as myself, August 6th, so that we were able to see the patients arriving in hospital and the next morning at 9 A M to see the ship before she had been cleaned and tidied up for her next voyage It was for me an additional privilege to have been allowed in the exigencies of a short visit to see the *Saikio* at a time when she was bound to be least in order and the favourable anticipations which I had formed of the transport service were strengthened rather than weakened by the experience

The *Saikio Maru* is a single funnelled, two masted steamer of about 1200 tons register belonging to a local Japanese company and fitted up temporarily for her present work The chief accommodation for sick and wounded consists of four large wards, two in front of, and two abaft the funnel, the former for medical and the latter for surgical cases The German differentiation into "innere Krankheiten,' or internal diseases (the officer in charge spoke only German), and 'chirurgische Krankheiten, or surgical diseases, is in general use in all the Japanese hospitals, corresponding fairly well, at least in military work, to the distinction in vogue in our own services These wards extended across the breadth of the ship and were situated one above the other on the main and lower decks,[1] the state rooms on the upper deck being reserved for operating theatre, pharmacy, laboratory, disinfecting chamber, and the quarters of medical and navigating officers In the South African war some of the British hospital ships had similar ward accommodation—as, for instance, on the *Avoca*—beneath the main deck in one of the holds, with a stairway built up through the hatch Ventilation is effected chiefly through canvas wind sails The arrangement is not altogether satisfactory, especially for a long voyage in tropical heat, but for sturdy convalescents drawn from classes of mankind that sleep soundly in hot rooms with stale air, the lower decks may, perhaps suffice for use at night under exigencies of war, so long as the patients are made to spend the day up on deck Still more is this reasonable with the Japanese wounded sailors when they have to be transported only two days journey across the sea in beautiful weather, with the thermometer every day up to 75° F in the shade on board ship and varying only 10° during the 24 hours

The accommodation of the vessel is as follows, the figures in italics being the only ones not given by the surgeon in charge upper medical ward, 44, lower medical ward, 28, upper surgical ward, 34, lower surgical ward, *37*, two isolation rooms, 14, cabins for commissioned officers, nine, and cabins for warrant officers, 11, making a total of 177 The shipload discharged on the previous day numbered 145, of whom the large proportion of 47 were stretcher cases It will be noted, of course, that the nearer the scene of action is to the base the greater will be the proportion of serious cases and the greater must be the provision of stretchers and stretcher bearers The cots were arranged down the length of the ship in two tiers in single file, end to end, with a gangway two feet six inches wide between each file The Japanese in their houses being accustomed to sleep on the floor, it is sufficient luxury for all but the most serious cases to lie on a three inch straw mattress on wood, and the cots, therefore, are mere wooden boxes or shallow drawers, with sides six inches high one of which flaps down on hinges to enable the patient or the mattress to be moved in and out more easily At either end the cot is hung by an iron plate to a wooden post allowing free lateral movement on a two foot radius, although of pitching and tossing it gives the patient his full dose It is a pity this should not be obviated in ambulance cots of all kinds The Japanese have in their public parks a very fascinating form of swing which consists of a heavy beam some 20 feet long and eight inches thick, hung horizontally a foot above ground by chains from gallows 22 feet apart Any number of children from one to 20 can stand on this beam and by common action swing it either to and fro or from side to side It might be worth while to try fitting up cots in some such simple and inexpensive way But nothing can prevent the patient rising and falling with the part of the ship he is in, and this is probably one of the chief factors of discomfort in a rough sea, another factor being the unconscious movement of the eyes in sympathy with the deck or ceiling, which might be largely overcome by the provision of a homogeneous black curtain and covering for a cot, at least for that part of it on which the eyes of the occupant rest This, however, is a refinement for physiologists and ocean steamship companies, not for a Japanese naval hospital ship in the present war

The bedding consists of a straw mattress, cheap and easily refilled, white sheets (unknown to the Japanese except in connexion with hospitals), and a red blanket in reserve Before crossing the threshold of the wards everyone takes off his or her outdoor pattens, sandals, "Jemima" boots or shoes, and puts on ward slippers, according to the cleanly custom in this country which we should long ago have adopted at home The importance of white sheets is perhaps not fully realised by those who have travelled little The common Japanese bedding consists of dark coloured silk or cotton quilts spread on the floor These cannot be washed and to rub them over with a damp cloth is considered sufficient, while their colour prevents any stains being visible White sheets and white caps and dresses for nurses have therefore been introduced into hospitals but not without considerable difficulty, for white is the colour of mourning and was vigorously objected to at first The common uniform now of all patients, whether in bed or convalescent on shore or at sea, at the front or base is a plain white kimono, or loose dressing gown, simply fastened by a small sash round the waist and adorned only by a plain red cross on the right arm It is a question whether we should not do well to have plain white pyjamas for all lying down cases in hospital and a proper supply of them as part of a normal equipment of a field hospital So simple are the tastes of the common people in Japan that there would be no need for luxuries, even if the voyage were for three weeks instead of days, and so one found on the ship no lockers, cushions, tables or chairs, libraries or games Even if they had the taste for any such comforts they probably would not realise any desire for them War is essentially their one aim and object at the present time They do not need relaxation or change of ideas The officers accommodation is equally simple, the usual first- and second class cabins, respectively aft and forward, being used without adaptation by officers and warrant officers, one or two to each room

Three small rooms have been adapted to isolate 14 cases of infectious disease One originally a second class lavatory, is completely detached from the large ward being placed right aft, on the starboard side of the steering gear The

[1] I am not quite certain about these two wards neath decks having been shown only one, for medical cases for ard The number-capacity is, however, official

others are away for'ard, close to the warrant officers' cabins, although not in direct communication with them. The provision of 14 isolation beds in three distinct wards is generous but not excessive, for a shipload may easily include cases of typhoid fever, beri-beri, and a suspicious rash, for instance, all of which require separate isolation, and an unused isolation room may always be used for ordinary cases. Moreover, the Japanese are very particular on the subject of dysentery, enforcing the most rigid measures of quarantine, isolation, and disinfection in all suspicious circumstances with a view to stamping out this, their commonest epidemic disease. Whether rational or not this necessitates a greater provision for isolation than usual. And they have here what one never heard of or saw in any ship during the Boer war—namely, a steam-disinfector in working order. This disinfector was made in Japan; in shape, size, and principle it was of the Washington-Lyon type and stood in a separate outhouse on the upper deck, with intake and outtake chambers properly separate. On the previous day three cases of typhoid fever had been landed and the bedding and clothing used by those patients were now in process of disinfection by heat.

The latrine system was fairly good, arranged, of course, with standing-boards instead of seats. In the separate water-closets standing-boards had just taken the place of seats. In a series of five closets close to the chief medical ward on the main deck there was in each compartment only a standing-board six inches above a common trough which was cleared automatically when the ship was in motion by a constant stream of salt water with a periodic flush. Unfortunately in harbour the trough remains unflushed and dry.

A simple hoist is arranged to raise lying-down patients to the upper deck for discharge or for operation or examination and dressing of wounds. This had the advantage over a similar arrangement on our s.s. *Spartan* of a hand-winch, which lessened the labour required. On the upper deck we took off our shoes again to enter the operating theatre, a clean and comparatively spacious little room made by knocking three cabins in together, with a preparation-room next door, and little equipment except wash-hand basins and sterilisers for dressings and for washing-water. The only drawback was the defective light owing to the spar- or saloon-deck outside cutting off more than half the light from these cabins which opened on to a covered gangway, six or eight feet across. The skiagraphic room contained a large induction coil, rests and holders for the tubes, a couch, and a stand for the two or three tubes in stock. A good deal of work is done both in this and in the operating-room, the ship being looked on essentially as a hospital and not merely as a transport. Major operations, however, are postponed in order that they may be performed on shore unless there is danger of sepsis or gangrene.

Another small room, of about the size of two cabins, was fitted up as a dispensary with well-arranged glass-windowed cupboards and a number of accessory appliances, such as a pair of formalin (paraform) stove-disinfectors, while in another room was a laboratory table with microscope in use, a good selection of stains, and even an elaborate steel microtome on the Schauze principle of the inclined plane. The chief omission to my mind was that of a weighing-machine—the most useful index of the retention of health by healthy troops and of the improvement in health by convalescents. The need of this is naturally less for a three days' than for a three weeks' voyage.

In the disembarcation of the wounded there was a point which deserved attention. When a patient was being carried on a stretcher down the ship's side ladder the foremost, or lower, bearer was preceded by a man walking backwards and partly supporting the handles of the stretcher which were nearly on a level with his shoulders. This method of reinforcing the lower bearer of a stretcher in descending steps is a useful addition to stretcher drill which at home, two years ago at least, contained no suggestion for the purpose. In ascending steps, on the other hand, the spare man of the squad should lean his hand on the small of the back of the rear bearer who will then have little more to do than to support the actual weight of his end of the stretcher and patient. I have an excellent photograph of the disembarcation of wounded from the sister ship, the *Kobe Maru*; it was taken by Dr. Habuto and is a graphic illustration of the scene. The patients and male nurses wear white clothing; the seamen, warrant officers, ship's mates, and naval surgeons wear blue. The Red Cross *brassard* is worn on the right arm instead of the left.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Housing Question.

THE opening of the courses in hygiene conducted at the Midland Institute has been, as usual, marked by the delivery of a public discourse by Dr. W. Wright, a member of the University staff, who has in his charge the courses in question. On this occasion he took for his subject that of the housing question which, he said, was only half stated when it was said to mean the provision of better houses for the poor. So far as England was concerned the fault lay perhaps more with the environment than with the actual dwellings themselves. He emphasised the importance of the subject by inquiring how it was that the death-rate in the city was double that of the country and by stating that the unhealthy surroundings were not merely responsible for much of the drunkenness in large towns but also for the presence of zymotic diseases and consumption, and for the anæmia, chronic ill-health, and absence of energy so characteristic of the poor. After describing and commenting upon the state of affairs to be met with in any large town the lecturer turned to the consideration of possible remedies for the existing conditions. He was of opinion that the best way of dealing with the difficulty was for municipalities to purchase land in the suburbs and to have an extension plan prepared which should determine the directions in which the town would be allowed to grow. This plan should include gardens, squares, tree-planted promenades, districts for manufactories, and districts for residence. The municipality might then encourage building societies to make use of the land by granting leases of from 60 to 80 years, by lending money at low rates, and by taking shares in the societies. By keeping possession of the land the municipality could itself have the unearned increment resulting from the growth of the city and the consequent increase in the price of land, instead of its passing, as at present, into the pockets of the land speculators. By turning over the building to societies they got over the objection to municipal houses and a privileged class and furnished the tenant with an incentive to purchase his own house. Hand-in-hand with that policy they should have cheaper transit, which would allow the worker to live away from his place of employment. Both these policies had been tried on the continent with the best of results. In Holland and Germany it was compulsory for every locality above a certain population to prepare an extension plan. The injunctions given by the Prussian Government to Prussian towns, insist- [illegible] of land, were so strong [illegible] lers. As regards transit in Belgium where the railways were mostly owned by the State, workmen could, if necessary, live at a distance of 30 miles from their place of work, travelling to and fro daily for 1*s.* 9*d.* per week, the time spent in travelling being more than compensated for by the comforts of a country home, by the cheaper rent, and by the greater working efficiency. Other useful ways of dealing with the question, which, however, could only be regarded as supplementary, were house-to-house inspection; rating of building sites on their selling value, as was done in New Zealand and Germany; the rating of the houses of the rich on a di[illegible] of the poor; and the building by the [illegible] for untidy and unscrupulous tena[illegible] kept under a quasi-police supervi[illegible] better and more sanitary habits.

Bacteria Process of Dealing with Sewage at Saltley.

On the occasion of the recent visit of the Incorporated Society of Municipal Engineers to Birmingham a visit was paid to the sewage works at Saltley. After an inspection of the works the visitors were entertained at lunch by Mr. John D. Watson, engineer to the drainage board, who, in responding to the toast of his health, said that they had a very excellent drainage board constituted by Act of Parliament and including the city of Birmingham, which was the predominant partner, Aston, Handsworth, Erdington, Smethwick, Sutton Coldfield, and one or two other places. These had combined for the purpose of treating the sewage of a great population of somewhere about 850,000 persons. They had their difficulties. Formerly the whole system was one of broad irrigation, now they were changing their methods and were finding difficulties in making the change. There was the difficulty of getting rid of sludge. They had not

been able to make precipitating tanks all at once. They had a sewage which was difficult to septicise; indeed, it was sometimes almost impossible, though the actual amount of micro-organisms was not so great as in other cases on account of the fact that the sewage contained a large number of iron salts with acids of various kinds. They had also constructed a number of bacteria beds, each of which was a quarter of an acre in size and capable of purifying a quarter of a million gallons. All these beds were more or less different and were so made because they were still seeking the best method of dealing with the sewage. His hope was that in five or ten years' time they would see all the land which they had passed through that morning—land now covered with crude sewage—under grass. He was not dissatisfied with land treatment. He found that they could obtain from it a purification of 92 per cent., and sometimes even of 93 per cent. and that was a very considerable purification, as great probably as they would ever obtain from bacteria beds. But if they could minimise the area required for the disposal of sewage they would at the same time minimise the chance of nuisance and that would be a great thing. The drainage board had acquired nearly six miles of the valley of the Tame and it was almost impossible to go further. Whilst they found that they were curtailed in that way the population of the district grew in such a ratio that, if they were to continue the system of broad irrigation and downward intermittent filtration, they would have to acquire and to lay out a fresh acre and a quarter every week.

City Analyst's Report.

The report of the city analyst for the year 1903 has recently been published and states that 444 samples of commodities were analysed, of which 286 were obtained under the provisions of the Sale of Food and Drugs Act. Of the articles belonging to this last class 25 were found to be adulterated—five by preservatives only and 20 in other ways. Out of 169 samples of milk, which were examined 21 were found to be adulterated or deficient. Butter, lard, and cheese came triumphantly out of the test except that a sample of unlabeled margarine was detected. The report draws particular attention to the necessity for examining into the compounding of prescriptions, a matter which has since received attention as will be seen from the cases recorded in my letter of a fortnight ago. The analyst considers that there are two [illegible] ng in connexion [illegible] e stipulated pro- [illegible] careless compilation of the mixture calculated to thwart the intention of the medical man by whom the prescription was written.

St. John Ambulance Association.

The Birmingham corps has been recently inspected by Brigade-Surgeon-Lieutenant-Colonel G. S. Elliston, V.D., [illegible] 3 central and eastern districts. [illegible] lson was also present and there [illegible] rps on parade. After the inspec- [illegible] liston addressed the men and said that he was very much pleased with their appearance and with the general smartness of their turn-out. He noticed that there was a large increase in the number of uniformed men and was pleased to note this, for in such a large and populous place as Birmingham the corps would be [illegible] of little use unless [illegible] neither the police [illegible] what they were. It [illegible] ould move freely in the crowd and do his duty. He was much pleased with their drill and though some people thought that comparatively little attention should be devoted to that part of the work and much more to the question of first-aid he did not agree with that view completely, for he [illegible] important matter since it was a [illegible] to develop habits of obedience and [illegible] were well up in stretcher drill on the parade ground they would not get on well when they had to deal with actual trouble in the streets or in large crowds.

Oct. 4th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Proposed Sanitary Reforms in Liverpool: Comprehensive Measures.

THE health committee of the city council has decided to apply to Parliament when the next Omnibus Bill is promoted for the [illegible] at the expiration of six years fr[illegible] floors of [illegible] surface of the ground; to deal [illegible] offices and other places of business; to amend the Shop Hours Act, 1892, so as to limit the number of consecutive hours of employment of any young person under 18 years of age; to regulate the time and manner in which the emptying of middensteads and the removal of manure or other offensive matter may be carried out; to prevent any receptacle containing refuse being deposited in any streets without the same being securely covered; to require ashbins to be substituted for such ashpits as shall be proved to be nuisances and the nuisance arising from which cannot be prevented without the ashpits being abolished; to extend the provisions of the Sale of Food and Drugs Act, 1875–1899, and to make them applicable to food prepared for human consumption in restaurants, cafés, hotels, bakehouses, and ships, and to enable samples of food to be taken when being delivered to any place where food is supplied or prepared for the use of the public; to regulate the manner of packing and carriage of live poultry; to make laws relating to the sanitation of hair-dressing saloons; to carry up-cast ventilating shafts of sewers up buildings and in passages; to deal with smoke and effluvia from railway tunnel ventilators and smoke nuisances arising in connexion with the working of locomotives or traction engines; also to deal with smoke nuisances in connexion with any vessel on the Mersey or in dock within the port of Liverpool. At pre[illegible] come under the ban [illegible] objectionable practic[illegible] who are prosecuted and fined. When the new powers are obtained the ocean liners will no doubt exercise a little restraint on their smoke. The only consolation at present is that the state of [illegible] the Mersey is not so bad as that o[illegible] also contain a clause enabling t[illegible] bs, seats, and newspaper kiosks on [illegible]

The Bucknill Scholarship at the University of London.

Mr. H. L. Tasker of the University of Liverpool has been elected to the Bucknill scholarship of £30 a year for four years at the University of London.

Liverpool Death-rate now Normal.

Dr. E. W. Hope, the medical officer of health, reported to the health committee on Sept. 29th that the death-rate of the city was 21·6 per 1000, as compared with 21·1 per 1000 last year, at which the committee expressed its satisfaction.

Liverpool School of Tropical Medicine: Yellow Fever Expedition to the Amazon: Report of the Trypanosomiasis Expedition to the Congo, 1903–04.

The committee of the School of Tropical Medicine proposes to despatch a second expedition to the Amazon in view of the necessity of investigating still further the causes of yellow fever. Medical research has succeeded in discovering several facts in connexion with yellow fever, in particular the fact that the disease is transmitted through the medium of the mosquito. At the same time the cause of the disease is absolutely unknown and can only be ascertained by research on the spot. The Liverpool School of Tropical Medicine has recognised since its formation the duty imposed upon it of doing its best in the interest of those who have to spend their lives in a region where yellow fever is endemic. The late Dr. Walter Myers was selected by the committee of the school, together with Dr. Herbert E. Durham, to undertake an expedition to Para to investigate the cause of the fatal disease only a few years ago. Both members of the expedition were attacked by the malady and it will be remembered that Dr. Myers succumbed to the disease; a brilliant investigator was thus lost to science. The nature of the work demanded of the experts selected entails so much risk that it is a matter of gratification that capable volunteers are to be found ready to undertake the duty. The expedition will probably start at the end of the year. The names of the members will be published later. The committee has published its thirteenth memoir devoted to reports of the trypanosomiasis expedition to the Congo, 1903–04, by Dr. J. E. Dutton, Dr. J. L. Todd, and Dr. Cuthbert Christy. The book is produced in quarto form and contains, besides matter fully describing the experiments, conclusions, &c., of the authorities named, several well-defined photogravures showing the condition of victims of

the disease in various stages. It also embraces a comparison of the sleeping sickness of the Uganda and that of the Congo Free State and includes a note on tsetse flies by Mr. E. E. Austin of the zoological department of the British Museum.

Oct. 4th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary.

DURING the past few years special appeals have from time to time been made by the board of management of the Cardiff Infirmary for assistance in the maintenance of special departments of that institution and the adoption of this policy has been followed by a considerable amount of success. The provision of funds for the support of the 16 beds in the women's ward was undertaken by an outside committee and five beds have now been endowed, three by individual donors of 1000 guineas each and two by the collection of a like sum from the Rhondda valleys and from the Pontypridd district. The remaining 11 beds are supported by annual subscriptions collected in other districts and in collieries. In the children's ward of the infirmary there are 26 cots, but from lack of funds only 16 can be occupied. An anonymous donor has come to the assistance of the board by sending a cheque for 1000 guineas to endow one cot and in doing so he appeals to the "kind-hearted fathers and mothers of the many happy well-to-do little ones in Cardiff" to support the cots which are now empty. Early in the present year Sir John Williams suggested the establishment of a convalescent home in connexion with the infirmary as an economical means of increasing the accommodation available in Cardiff and a step in this direction has now been taken by arrangement with the governing body of the Porthcawl Rest. From Nov. 1st to March 31st there will be 12 cots in the Rest at the disposal of the infirmary management which will provide the requisite number of nurses and will pay 10*s.* 6*d.* weekly for each child and nurse sent to the Rest. This will do something to lessen the pressure upon the resources of the children's ward in the infirmary to which there are at present nearly 150 little patients awaiting admission. The Porthcawl Rest is the only convalescent home in South Wales and accommodates more than 100 patients, including 20 children.

New Workhouse at Newport.

At the thirteenth conference of the Poor-law authorities of South Wales and Monmouth, which was held at Newport (Mon.) on Sept. 27th and presided over by Lord Tredegar, an account was given by Mr. W. H. Brown, the vice-chairman of the Newport board of guardians, of the workhouse which has been recently erected by the Newport board. The cost of this building, exclusive of the land which was given some years ago by the Tredegar estate for workhouse purposes, was a little over £100 per bed and Mr. Brown compared this sum with £8 10*s.* per bed which was the cost of workhouses erected in Kent in the year 1835. The principal features of the Newport workhouse are the classification of the sexes and of the old and young, separation of the worthless characters from the better behaved, efficient supervision by officials, good bathing facilities, ready exits in case of fire, quarters for married couples, separate accommodation in detached buildings for infants and for the sick and infirm, detached receiving wards, and the provision of workshops for men and of a well-equipped laundry for women.

The Tramp Question.

Upon the second day of the conference there was an animated discussion on the best method of dealing with tramps. There was a general agreement among those present that the *bonâ-fide* workman in search of employment should receive different treatment from the professional tramp, with whom he should not be compelled to associate, and that he should be assisted in obtaining work. For the habitual tramp the establishment of labour colonies or settlements was advocated, one speaker suggesting that there was a large quantity of uncultivated land in South Wales which might be reclaimed, while another one pointed out that the re-afforestation of land might be undertaken, tree planting being a form of work in which vagrants could be advantageously employed. The opinion was freely expressed that vagrancy should be controlled and regulated by the State and not by local authorities, and a motion was passed, with only a few dissentients, calling upon the Government to deal with the tramp question generally as a matter of much importance, the present system acting unfairly upon some unions and not being effectual in lessening the number of tramps in the country.

Penarth Isolation Hospital.

The Glamorgan county council has made several compulsory orders under the Isolation Hospital Act, 1893, and one of these constituted Penarth urban district a "hospital district." The hospital, which has been built by the urban district council, is now completed. The buildings, which are on the Local Government Board plan, stand on a site of three and a half acres and include an administrative block, a laundry block, a one-storey pavilion with two six-bed wards, and a pavilion for four patients. The total cost of the hospital was £8000.

School Children in Bristol.

One of the recommendations of the Inter-departmental Committee on Physical Deterioration was that definite provision should be made by the various local authorities for dealing with the question of underfed children. The Bristol education committee had the matter under consideration on Sept. 29th and referred it to a sub-committee to report as to the practicability of giving effect to the proposal.

Winsley Sanatorium.

Dr. W. A. Salmond has been appointed medical superintendent of the Winsley Sanatorium and will begin his duties on Nov. 1st. It is hoped that patients will be admitted about the middle of November.

Death of Mr. T. F. Edgeworth, M.R.C.S. Eng., M.S.A.

The sudden death on Sept. 29th of Mr. Thomas Francis Edgeworth has removed from Bristol one of the oldest and most esteemed practitioners. He was born in Bristol in the year 1834 and after qualifying in 1855 he acted as a naval surgeon for about three years, practising for the remainder of his life in Bristol, where he took a very active interest in political and municipal affairs. He is survived by his widow, two daughters and one son, Dr. Francis Henry Edgeworth.

Extension of Bristol.

The boundaries of Bristol were extended in 1897, when the area of the city was increased by 7196 acres and the population by over 50,000 persons. A still further extension took place on Oct. 1st last, when 5347 acres and 13,443 persons were added to the city, the rateable value of which was increased by nearly £70,000. The area of Bristol is now 17,000 acres, the population 355,000, and the rateable value £1,723,000. The increase in population has not altered the relative position of Bristol among the county boroughs of England and Wales. There are still five boroughs with a larger population—namely, Liverpool, Manchester, Birmingham, Leeds, and Sheffield.

Swansea Sewerage Scheme.

The sewage of Swansea has always been discharged into the bay around which the town is built. Until 1855 the river and the streams which tumble down the hillsides were the natural sewers but in that year a drainage scheme was established and this has from time to time been extended until there are now at least five properly constituted sewer outfalls. The increased population to be provided for and the flooding of houses in the lower parts of the borough have rendered necessary still further extensions of the public drainage and upon several occasions during the past eight or ten years attempts have been made by the corporation to carry out a more or less comprehensive scheme of sewerage for the town. Unfortunately, there has been very considerable difference of opinion as to the best means of relieving the pressure upon the existing sewers and at the same time of draining certain newly built portions of the town. One scheme, which was estimated to cost £80,000, provided for an outfall near the pier-head. This was approved by the borough engineer and by the medical officer of health (Mr. Ebenezer Davies) and met with a great deal of support. An alternative proposal which would cost considerably less money and by which the sewage was to be discharged into the bay on the western side of the town, was, however, after much discussion, finally approved by a majority of the members of the corporation. The sanction of the Local Government Board was obtained to the scheme and it appeared likely that it would actually be

carried out The Board then pointed out that the sanction of the Board of Trade must be obtained for the construction of [illegible] was refused [illegible] could convey [illegible] It was then [illegible] septic tank [illegible] which was [illegible] 24 hours. An inquiry into this latest proposal was held on Sept. 27th and the following days by an engineer representing the Board of Trade and a superintending inspector of the Board of Agriculture and Fisheries A large amount of evidence was given both for and against the scheme which is estimated to cost £53,000. The opposition was principally based upon the anticipated damage to the mussel and oyster fisheries and upon the fact that the proposed outfall was close to the sands which are one of Swansea's greatest attractions It was contended, on the other hand, that all danger to the fisheries and all nuisance on the sands would be overcome by the intercepting septic tank which it is not proposed, however, to supplement with any form of filtration In the event of the scheme [illegible] be of interest to follo [illegible] ll be a great triumph

Presentations

Dr. Rowland Lee, who has been for two years resident medical officer at the Cardiff Union Hospital and who is leaving Cardiff, was presented on Sept 26th with a dining table and a marble timepiece by his fellow officials —Mr Albert Bradshaw, who is leaving Wattlesborough, Salop, where he has practised for the last 11 years, was presented by his patients on Sept 27th with a gold watch Mrs Bradshaw was at the same time the recipient of a marble clock

North Devon Infirmary, Barnstaple

The ladies of Barnstaple, at a meeting held on Sept 28th under the presidency of Lady Susan Fortescue, resolved to form a ladies' association in connexion with the North Devon Infirmary The association will seek to promote the prosperity of the institution by organising entertainments in aid of the funds, arranging concerts for the patients, collecting money, contributing clothing to patients, and interesting others in the work of the association.

Oct 4th

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Benn Lye, Ear, and Throat Hospital, Belfast

AT the thirty-third annual meeting of the supporters of this hospital, held on Sept. 27th, special reference was made to the loss sustained by the charity in the death of its founder and first surgeon, Dr. W A McKeown During the past year 238 persons were treated in the wards and there were 7063 attendances of extern patients The total income for the year was £908 1s, an increase of about £14 compared with the previous year Dr W. M Killen has been appointed acting surgeon in place of the late Dr. McKeown and he is assisted by Dr Robert Allen in the surgical work and by Dr. I A Davidson who has been appointed anæsthetist Very special reference was made by all the speakers to the lamented death of Dr. McKeown.

The Belfast Asylum.

The Belfast papers have recently contained articles by Mr W E Ellis, Local Government Board auditor, concerning the Belfast Asylum, and by the resident superintendent, Dr W. Graham The matters in dispute are in reference to the form of paying orders, financial matters, and the question of dietary, whether it should be a rigid or an elastic one Dr Graham brings forward strong arguments in support of the dietary being elastic so as to adjust the amount of food to the varying appetite and his committee is wisely in favour of the view that in matters of food the resident medical superintendent should have the fullest discretion to meet varying and special circumstances

The Chair of Pathology in Queen's College, Belfast

Considerable surprise is felt in medical circles in Belfast at the prolonged delay in publicly announcing the vacancy in the chair of pathology. Not only has Dr. J. Lorrain Smith resigned but he has left Belfast and given his opening address at the Manchester School The session in the Belfast Medical School will open on Oct 18th and as Dr. Lorrain Smith held the appointment of pathologist to the Royal Victoria Hospital the board of management (with which the appointment rests) will have to choose his successor so as to begin work at once. There is a strong feeling, especially among the younger members of the staff of the Royal Victoria Hospital, that the new hospital pathologist [illegible] tion to the clinical bearings of [illegible] mediate help as to the nature of [illegible] and also to assist more in such [illegible] by cultures, &c, of the efficiency or not of the measures adopted for the perfection of surgical technique Up to the present (Oct 3rd) no official announcement as to the chair has appeared in the Belfast papers (as is usually the case), saying up to what date candidates may apply

Oct 3rd

PARIS

(FROM OUR OWN CORRESPONDENT)

Charitable Bequests

THE authorities of the Assistance Publique have been authorised by decree to accept a bequest of about 1,100,000 francs (£44,000) which has been left by M de Valencourt for the purpose of building a clinic in connexion with the Paris Faculty of Medicine The clinic, which will bear the name of the founder, will probably be established in proximity to the Hôpital de la Charité In accordance with a wish expressed by the founder the director of the Assistance Publique will on this point consult the dean of the Faculty of Medicine —Another bequest of about 4,000,000 francs (£160,000) has been left by General Count Roguet to found a hospice and an orphanage The erection of the buildings, which have cost 1,500,000 francs, has just been completed Accommodation is provided for 60 aged persons and 60 orphans, and the department of the Seine will appoint one-third of the inmates The conditions of admission have been drawn up by the administrative committee of the foundation and have been approved by the prefect Admission rests with this committee, which has the Mayor of Chichy for its president and is composed of two members of the municipal council of [illegible] nominated by the prefect, two [illegible] general council of the Seine [illegible] working order

The Production and Distribution of Vaccine Lymph

The Prefect of the Seine has just appointed, as from August 8th, a commission for the supervision and control of establishments for the production and distribution of vaccine lymph in Paris and the department of the Seine This commission is composed of the general secretary of the Prefecture of the Seine, of M. Chantemesse and M Roux, members of the Academy of Medicine, and of the director of the veterinary service of the Seine The secretaries will be M Calland and M Juillerat, chief clerks in the Prefecture of the Seine and administrative secretaries of the Comité d'hygiène et de salubrité de la Seine.

Prevention of Tuberculosis

[illegible] Male and Female Teachers has [illegible] torium for tuberculous patients [illegible] already commenced The site is on the slope of the Puy Gaudy, near Guéret.

Physical Development of School Children

An excellent system which was introduced last year in the Lycée Louis le Grand will be followed in all the lycées when they re open The weight, height, and chest measurement of all the pupils will be taken every three months in order that their physical development and the state of their health may be estimated The results will be entered upon cards which will be sent to the relatives of the pupils

Société d'Hygiène de l'Enfance.

This society is offering prizes for essays on the hygienic effects of children's games Manuscripts will be received up to, but not later than, Dec 31st, 1904 They must not have been previously published and must be written in French, German, English, Italian, or Spanish. They

2.30 P.M.—Visits to the Samaritan Free Hospital for Women and Children, St. Mark's Hospital for Fistula, and the West London Hospital.

4 P.M.—Visit to the Medical Graduates' College.

WEDNESDAY, OCT. 12TH.

10 A.M.—Visit to the Imperial Cancer Laboratories, the Lister Institute of Preventive Medicine, Charing Cross Hospital, King's College Hospital, Chelsea Hospital for Women, and the Royal College of Surgeons Museum.

11.45 A.M.—Train from Liverpool-street Station to visit the Pathological Laboratory of the London County Council Asylums at Claybury (limited to a party of 30 visitors).

1.30 P.M.—Visit to the Royal Free Hospital.

2 P.M.—Visits to the London Hospital, St. George's Hospital, University College Hospital, and St. Peter's Hospital for Stone.

2.30 P.M.—Visit to the Hospital for Consumption and Diseases of the Chest, Brompton, the Victoria Hospital for Children, and the West London Hospital.

4 P.M.—Visit to the Medical Graduates' College.

4.30 P.M.—Meeting of the Dermatological Society of London at 11, Chandos-street, Cavendish-square.

7.15 P.M.—Banquet offered to all the visitors by the London Executive Committee at the Hotel Cecil, Strand.

The following additional subscriptions have been received:—

	Subscriptions. £	s.	d.		Further guarantees. £	s.	d.
Mr. Malcolm McHardy	5	5	0	.....		—	
Mr. J. Tweedy	5	5	0	.....		—	
Mr. Thomas H. Wakley	5	5	0	.....		—	
Mr. Ballance	4	4	0	.....		—	
Dr. H. F. Champneys	4	4	0	.....		—	
Mr. Watson Cheyne	4	4	0	.....		—	
Mr. Stanley Boyd	3	3	0	.....		—	
Mr. D. H. Goodsall	3	3	0	.....		—	
Mr. A. Pearce Gould	3	3	0	.....		—	
Sir Hermann Weber	3	3	0	.....		—	
Mrs. Garrett Anderson, M.D. ...	2	2	0	.....	3	3	0
Dr. G. Granville Bantock	2	2	0	.....	1	1	0
Mr. Arthur E. J. Barker	2	2	0	.....	2	2	0
Mr. H. L. Barnard	2	2	0	.....		—	
Dr. E. F. Bashford	2	2	0	.....	1	1	0
Dr. Charlton Bastian	2	2	0	.....	3	3	0
Dr. Frederick E. Batten		—		.....	2	2	0
Dr. E. Clifford Beale	2	2	0	.....		—	
Dr. Charles E. Beevor...	2	2	0	.....		—	
Sir William Bennett	2	2	0	.....	5	5	0
Dr. G. H. A. Comyns Berkeley ...	2	2	0	.....		—	
Mr. J. Berry	2	2	0	.....	3	3	0
Dr. Percy Boulton	2	2	0	.....	1	1	0
Mr. A. A. Bowlby	2	2	0	.....	2	2	0
Dr. Brailey	2	2	0	.....	0	10	6
Dr. T. Buzzard	2	2	0	.....	3	3	0
Dr. Caley	2	2	0	.....	1	1	0
Dr. J. Walter Carr	2	2	0	.....		—	
Dr. George Cathcart	2	2	0	.....	1	1	0
Dr. W. B. Cheadle	2	2	0	.....	5	5	0
Sir William S. Church	2	2	0	.....	5	5	0
Mr. H. H. Clutton	2	2	0	.....	3	3	0
Sir Alfred Cooper	2	2	0	.....	3	3	0
Dr. C. J. Cullingworth	2	2	0	.....		—	
Dr. W. R. Dakin	2	2	0	.....	2	2	0
Dr. Norman Dalton	2	2	0	.....	1	1	0
Dr. Davis	2	2	0	.....		—	
Mr. Clinton T. Dent	2	2	0	.....		—	
Mr. A. H. G. Doran	2	2	0	.....		—	
Dr. A. Eddowes...	2	2	0	.....		—	
Dr. T. W. Eden	2	2	0	.....		—	
Mr. F. Swinford Edwards	2	2	0	.....	3	3	0
Dr. E. Laming Evans	2	2	0	.....		—	
Mr. H. Fenwick...	2	2	0	.....	3	3	0
Mr. Percy Flemming	2	2	0	.....		—	
Dr. Philip Frank	2	2	0	.....	3	3	0
Mr. P. J. Freyer	2	2	0	.....	3	3	0
Mr. F. J. Gant	2	2	0	.....		—	
Dr. Archibald E. Garrod	2	2	0	.....		—	
Dr. J. Gay...	2	2	0	.....		—	
Dr. J. H. Gibson	2	2	0	.....	3	3	0
Mr. R. J. Godlee	2	2	0	.....		—	
Dr. J. F. Goodhart	2	2	0	.....	3	3	0
Sir William Gowers	2	2	0	.....		—	
Dr. Alfred Gubb	2	2	0	.....		—	
Mr. Gunn...	2	2	0	.....	3	3	0
Dr. Haig	2	2	0	.....		—	
Dr. M. Handfield-Jones	2	2	0	.....		—	
Mr. Reginald Harrison	2	2	0	.....	3	3	0
Dr. F. de Havilland Hall	2	2	0	.....		—	
Dr. Herbert Hawkins	2	2	0	.....		—	
Mr. Charles J. Heath	2	2	0	.....		—	
Dr. Lenton Heath	2	2	0	.....		—	
Dr. G. E. Herman	2	2	0	.....	3	3	0
Dr. W. P. Herringham	2	2	0	.....	3	3	0
Dr. J. Hewitt	2	2	0	.....		—	
Dr. Horrocks	2	2	0	.....		—	
Dr. Henry G. Howse		—		.....	2	2	0
Mr. J. Hutchinson	2	2	0	.....	3	3	0
Mr. J. Hutchinson, jun.	2	2	0	.....		—	
Dr. J. Hughlings Jackson	2	2	0	.....	3	3	0
Mr. W. H. H. Jessop	2	2	0	.....	3	3	0
Dr. Boyd B. Joll...	2	2	0	.....		—	
Dr. Robert Jones	2	2	0	.....		—	
Mr. C. B. Keetley	2	2	0	.....		—	
Mr. T. H. Kellock	2	2	0	.....		—	
Mr. H. W. Kiallmark	2	2	0	.....		—	
Dr. Percy Kidd	2	2	0	.....		—	
Sir John Kirk	2	2	0	.....	2	2	0
Mr. W. Arbuthnot Lane	2	2	0	.....	3	3	0
Dr. W. Lang	2	2	0	.....	1	1	0
Mr. J. Langton	2	2	0	.....	2	2	0
Mr. J. B. Lawford	2	2	0	.....		—	
Dr. Liveing	2	2	0	.....		—	
Mr. Lockwood	2	2	0	.....	3	3	0
Mr. Clement Lucas	2	2	0	.....	3	3	0
Dr. A. P. Luff	2	2	0	.....		—	
Mr. J. McCarthy	2	2	0	.....		—	
Dr. H. J. Macevoy	2	2	0	.....		—	
Sir Stephen Mackenzie	2	2	0	.....		—	
Dr. Macnamara...	2	2	0	.....		—	
Sir Patrick Manson	2	2	0	.....		—	
Professor Howard Marsh	2	2	0	.....		—	
Mr. E. G. Moon...	2	2	0	.....		—	
Mr. J. H. Morgan	2	2	0	.....		—	
Mr. M. Morris	2	2	0	.....	3	3	0
Dr. F. W. Mott...	2	2	0	.....		—	
Mr. C. W. Mansell Moullin	2	2	0	.....		—	
Mr. T. W. Nunn	2	2	0	.....		—	
Dr. Ormerod	2	2	0	.....		—	
Mr. Edmund Owen	2	2	0	.....	3	3	0
Mr. Herbert Page	2	2	0	.....	3	3	0
Dr. F. G. Penrose	2	2	0	.....		—	
Mr. George Pernet	2	2	0	.....		—	
Dr. Rivers Pollock	2	2	0	.....		—	
Dr. Fitzgerald Powell...	2	2	0	.....		—	
Dr. Pringle	2	2	0	.....	3	3	0
Dr. Urban Pritchard	2	2	0	.....		—	
Dr. Rhodes	2	2	0	.....		—	
Mr. H. Betham Robinson	2	2	0	.....	3	3	0
Mr. Mayo Robson	2	2	0	.....		—	
Dr. Routh	2	2	0	.....	3	3	0
Mr. Charles Ryall	2	2	0	.....	3	3	0
Dr. A. E. Sansom	2	2	0	.....		—	
Dr. G. H. Savage	2	2	0	.....		—	
Dr. T. D. Savill	2	2	0	.....	1	1	0
Mrs. Scharlieb, M.D.	2	2	0	.....		—	
Dr. G. Schorstein	2	2	0	.....	3	3	0
Dr. S. J. Sharkey	2	2	0	.....	3	3	0
Dr. Lauriston E. Shaw	2	2	0	.....		—	
Mr. Arthur Shillitoe	2	2	0	.....		—	
Dr. W. J. R. Simpson	2	2	0	.....		—	
Dr. Percy Smith	2	2	0	.....		—	
Sir Thomas Smith	2	2	0	.....	3	3	0
Dr. Herbert Spencer	2	2	0	.....	3	3	0
Mr. George Stoker	2	2	0	.....		—	
Dr. S. P. Sunderland	2	2	0	.....	2	2	0
Dr. Charters J. Symonds	2	2	0	.....	3	3	0
Dr. W. H. Tate	2	2	0	.....		—	
Dr. James Taylor	2	2	0	.....	2	2	0
Dr. StClair Thomson	2	2	0	.....	1	1	0
Dr. H. G. Turney	2	2	0	.....		—	
Sir John Tyler	2	2	0	.....	3	3	0
Dr. W. J. Tyson	2	2	0	.....		—	
Dr. Albert J. Venn	2	2	0	.....	3	3	0
Dr. Vintras	2	2	0	.....		—	
Mr. Waggett	2	2	0	.....		—	
Mr. Cuthbert Wallace...	2	2	0	.....	2	2	0
Mr. F. C. Wallis...	2	2	0	.....		—	
Dr. Parkes Weber	2	2	0	.....	1	1	0
Dr. A. Whitfield...	2	2	0	.....		—	
Dr. Leonard Williams	2	2	0	.....		—	
Dr. T. Outterson Wood	2	2	0	.....	3	3	0
Mr. H. Batty Shaw	1	1	0	.....		—	
Dr. Stansly	1	1	0	.....		—	

Sir Thomas Barlow, Bart., 10, Wimpole-street, W., and Dr. J. Dundas Grant, 18, Cavendish-square, W., are the treasurers and Dr. Dawson Williams, 2, Agar-street, Strand, W.C., and Dr. W. Jobson Horne, 27, New Cavendish-street, W., are the secretaries.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the examinations held in September the following candidates passed in the subjects indicated:—

Surgery.—C. C. Bernard (Section II.), Royal Free Hospital; and A. Innes (Sections I. and II.), Glasgow.

Medicine.—J. A. Davies (Sections I. and II.), Manchester; A. Innes (Sections I. and II.), Glasgow; W. A. T. Lloyd (Sections I. and II.) and T. R. Roberts (Section I.), London Hospital; and H. P. Shanks, St. Bartholomew's Hospital.

Forensic Medicine.—J. Bromley, Guy's Hospital; J. A. Davies, Manchester; A. Innes, Glasgow; J. M. Lynch, Cork; and L. W. Roberts, Middlesex Hospital.

Midwifery.—E. J. Blewitt, London Hospital; E. J. Crew, Guy's Hospital; A. [illegible] ch, Cork; M. B. Potts, Leeds; and A. [illegible] Hospital.

The diploma of [illegible] ie following candidates, entitling them to [illegible] and midwifery: C. C. Bernard, J. Bromley, A. Innes, M. B. Potts, and H. P. Shanks.

UNIVERSITY OF GLASGOW.—The following candidates have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

Ander-
B., P.),
lantyne
B., P.),
Barrie
Adam
John
s Lang
Cramb
Charles
Duguid (B.), William Hunter Duncan (Z.), Philip Elgdor (B.), Robert Dunlop Black Frew (B., Z.), David Gibson (B.), Alexander Gordon Gilchrist (B., P.), Walter Gilmour (B., P.*), George Stevenson Gordon (B., P.), Hugh Macvicar Gossman (C.), Edward O'Driscoll Graham (B., C.), John
, C.),
, Z.),
, P.),
Colin
Kiep
Knox
(Z.),
* P.)

William Alexander Sewell (B., P.), James Brown Sim (B., C.),
s Stewart Somerville (B.),
ward Ernest
P.), David
Alexander
P.), Arthur
ker (B., P.) William Samuel
(Z., C.), Harold Wellwood
(B., P.), William Crowley
Whittingham (B., P.), Charles Percival Williamson (C.), John Alexander Wilson (B., P.), Henry Joseph Windsor (B., P.), Hugh Young (Z., C.), and John Young (Z., C.*)

Women—Mabel Foley (B., Z.), Euphemia Adamson Hay (B., Z.), Ella Smith Hill, M.A. (B., Z.), Jeanie Walker Jones (B., Z.), Honoria Somerville Keer (B., Z.), Janet Annie Macvica (B.), Mary Cochran Mitchell (B., Z.), Flora Morrison (C.), Jessie Denis Rankin (B., Z., C.), Olive Robertson (C.), Winifred Margaret Ross (B., Z., C.), Jessie Capie Russell (B., Z.), Margaret Elizabeth Rutherfurd (P.), Jemima Wallace (B.), and Ethelwyn Mary Walters (B., Z.).

The following have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., anatomy; P., physiology; M., materia medica and therapeutics):—

James Montgomery Anderson (A.P.), John Anderson, M.A., B.Sc. (A., P.,* M.), Thomas Barbour, B.Sc. (M.), William Rome Cammock
A., P., M.), John Sawers Clark,
(M.), Robert Donald (A., P., M.
, P., M.), Richard John Driscoll
Milne Eaton (M.), William Miller
, M.), Thomas Henderson Forrest
(A.), James Wilfred Georgeson (A., M.), William Gillillan (A., P., M.), Arnold Harris Gray (M.), Will

ohn Torrance Weir
nbull (A.), George
gh White (A., P.),
ng, M.A. (P.), and

e Rennie Hird (P.),
Jversby (A.), Vera
).

ssional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P., pathology; M., medical jurisprudence and public health)—

Andrew Blair Aitken (M.), George Allison Allan (M.), Andrew Woodroffe Anderson (P.), John Bain, M.A. (P., M.), George

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr J. Boeke has been recognised as *privat-docent*

—*Lemberg.* Dr Stanislaus Badzynski has been promoted to the Ordinary Professorship of Hygiene and Dr. Wladimir Sieradski to the Ordinary Professorship of Forensic Medicine. —*Naples.* Dr Tommaso Senise has been appointed Professor of Internal Pathology.—*Pavia:* Dr. Arturro Marcacci of Palermo has been appointed Professor of Physiology.—*Prague (German University):* Dr. Franz Luksch has been recognised as *privat docent* of Pathological Anatomy

IN PRE-
OXON.)—
h will com-
mence at 10 A.M. on Tuesday, Nov. 22nd, must be transmitted to the secretary to the Boards of Faculties, Clarendon Building, Broad street, Oxford, not later than 10.30 A.M. on Tuesday, Nov. 8th. Candidates, who need not be members of the University, must produce evidence of having satisfied the requirements of the General Medical Council relating to diplomas in public health. The examination is in two parts which may be taken together or at separate examinations. The fee for each part is £5. Part I. comprises the applications of chemistry and physics to general hygiene. Part II. comprises the following subjects: general pathology, with special relation to infectious diseases, the law relating to public health, sanitary engineering, and vital statistics. The examinations are conducted partly in writing, partly *viva voce*, and in each subject partly practical.

THE TEACHING OF MASSAGE.—On Oct. 3rd the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, opened a school for the teaching of massage. The arrangements for the establishment of the school have been in the hands of a committee appointed by the medical staff and the board, consisting of the chairman of the hospital, Dr Risien Russell, and Dr. W. Aldren Turner. The school will be held in the hospital and is under the direction of Madame Gripenwald. Only female pupils have entered for the present term but it is proposed to appoint a male instructor and to take male pupils when a sufficient number shall have entered their names. The chairman of the hospital at the opening of the school, in addressing the pupils, said that the National Hospital had for some years taught massage but that the gradual adoption of the Swedish movements by the medical profession in England had now rendered it necessary to extend the teaching. The National Hospital had appointed a competent Swedish lady to instruct the pupils and to present them for examination, and the object of the medical men who would examine them would be to make sure that they were competent to carry out the instructions which were now commonly given by English physicians to medical rubbers. The hospital would have no interest in giving a certificate to anyone who was not up to the mark, because they hoped ultimately to establish a co-operation of medical rubbers holding the National Hospital certificate and only those who could be relied upon would be

placed upon the list. It may be stated that the fees of the school are £8 8*s.* per term of three months—i.e., one course. A certain number of the nurses of the hospital will be trained in the school free of charge.

Lord Ludlow has been appointed a member of the weekly board of the Middlesex Hospital.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—The following scholarships have been recently gained: First entrance scholarship (£100), Mr. A. O. English; second entrance scholarship (£60), Mr. P. S. B. Langton; university scholarship (£60), Mr. E. L. Kennaway, B.A. Oxon.; and Freer Lucas scholarship (£126), Mr. E. A. Saunders.

A RUSSIAN CENTENARIAN.—An active centenarian, named Anton Visnevski, lives at the village of Piavno, near Plotsk, says the *Novoe Vremya*. He is alleged to be 105 years of age. He enjoys perfect health, sees well, hears well, and at the present time is engaged at field work.

ROYAL WATERLOO HOSPITAL FOR CHILDREN.—Their Royal Highnesses Prince and Princess Henry of Prussia are among those who are giving support to the greatly extended work of the Royal Waterloo Hospital for Children and Women. Their Royal Highnesses have just written from Kiel expressing deep sympathy with the work and have become annual subscribers of five guineas.

CHARGE AGAINST A VETERINARY SURGEON.—At Cranborne petty sessions held on Sept. 24th a veterinary surgeon of Donhead (Wilts) was summoned at the instance of the Dorset police for giving a false certificate. The certificate in question stated that he had examined 50 lambs which were entered for a sale, but it was proved that he had not done so, and he was fined £12 10*s.* and costs.

OLD CLOTHES AND INFECTION.—On the initiative of some Warsaw medical men it is proposed to open in various parts of Warsaw, particularly in the poorer quarters, public laundries at which linen will be cleaned at a very low charge. Disinfecting chambers will also be installed and garments bought from old clothes merchants will be disinfected free of charge.

KING'S COLLEGE AND KING'S COLLEGE HOSPITAL (UNIVERSITY OF LONDON).—The following scholarships have been awarded in the Faculty of Medicine: Medical entrance scholarship, £50, E. B. Clayton and A. F. Comyn (equal); Sambrooke scholarship, £100, B. Hughes; two Warneford scholarships, £100 each, T. H. Whittington and G. Matthews; and Epsom scholarship, H. A. Milner.

DONATIONS AND BEQUESTS.—Mrs. Mainwaring Jones has given £1000 for the endowment of a bed in the new wing of Charing Cross Hospital in memory of her husband, Lieutenant-Colonel M. Jones, H.A.C.—By the will of Mr. Charles W. Waters of Streatham the London Hospital, Charing Cross Hospital, University College Hospital, the Royal Free Hospital, and the London Fever Hospital each receive £1000.

TRINITY COLLEGE, DUBLIN.—The school for the medical services, which was started in Trinity College at the beginning of the year and has proved successful at the Royal Army Medical Corps and Indian Medical Service examinations, will commence its second session on Nov. 7th. The object of the school is to enable Irish medical students who desire to adopt the navy or army as a profession to prepare themselves in Ireland.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B. ET FILS, 19, Rue Hautefeuille, Paris.
Les Rayons N et les Rayons N_1. Par le Dr. H. Bordier, Professeur agrégé à la Faculté de Médecine de Lyon. Price Fr. 1. 50.

CONSTABLE, ARCHIBALD, AND CO., LIMITED, 16, James-street, Haymarket, London, S.W.
New Methods of Treatment. By Dr. Laumonier. Translated and edited from the second revised and enlarged French edition by H. W. Syers, M.A., M.D. Cantab., Physician to Out-patients Great Northern Central Hospital. Price 3*s.* 6*d.* net.
A Short Treatise on Anti-Typhoid Inoculation. Containing an Exposition of the Principles of the Method and a Summary of the Results achieved by its Application. By A. E. Wright, M.D. Univ. of Dublin, late Professor of Pathology, Army Medical School, Netley; Pathologist to St. Mary's Hospital, Paddington, W. Price 3*s.* 6*d.* net.

B.C., [illegible] Thomas's Hospital. Price 7*s.* 6*d.* net.
Clinical and Pathological Observations on Acute Abdominal Diseases due to Conditions of the Alimentary Tract and the [illegible] gin. The Erasmus Wilson Lectures, 1904. B.Sc. Lond., M.A., M.B., B.C. Cantab., [illegible] to Out-patients; Surgeon to the Physical [illegible] St. Thomas's Hospital. Price 3*s.* 6*d.* net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.
Lehrbuch der Physiologie. Von L. Hermann. Dreizehnte, durchgehends umgearbeitete und vermehrte Auflage. Price M.16.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, London.
Life of Richard Wagner. By W. Ashton Ellis. Vol. IV.

SIMPKIN, MARSHALL, HAMILTON, [illegible] CORNISH BROTHERS, LIMITED, 37, [illegible]
On the Sterilisation of the Ha[illegible] the Relative Value of Various [illegible] the Hands. By Charles Leedh[illegible] to Out-Patients, Queen's Hospital, [illegible] and Midland Hospital for Children; Assistant Lecturer on Bacteriology, University of Birmingham. Price 2*s.* 6*d.* net.

SKEEN, GEORGE J. A., Government Printer, Colombo, Ceylon.
The Medical History of Prisoners of War in Ceylon, 1900–1903. By Allan Perry, M.D., D.P.H., Principal Civil Medical Officer and Inspector-General of Hospitals, Ceylon. Price not stated.

STOCK, ELLIOT, 62, Paternoster-row, E.C.
"The Example of Liverpool." A Series [illegible] to the *Liverpool Journal of Commerce*. By [illegible]s. Price 1*s.* net.

WILEY, JOHN, AND SONS, New York (CHAPMAN AND HALL, LIMITED, London).
Food Inspection and Analysis. For the Use of Public Analysts Health Officers, Sanitary Chemists, and Food Economists. By Albert E. Leach, S.B., Analyst of the Massachusetts State Board of Health. First edition. First thousand. Price 31*s.* 6*d.* net.
The Suppression of Tuberculosis, together [illegible] cerning Phthisiogenesis in Man and An[illegible] concerning the Hygiene of Cow Stables [illegible] Milk for Infant Feeding, with Special Reference to Tuberculosis. By Professor E. von Behring, University of Marburg. Authorised translation by Charles Bolduan, M.D. First edition. First thousand. Price 4*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ABBOTT, CHARLES EDWARD, L.R.C.P., L.M. Irel., M.R.C.S., has been appointed Medical Officer for the Roche and St. Dennis Districts (Cornwall).
ALWAY, W. R., M.B. Toronto, has been appointed Clinical Assistant to the Chelsea Hospital for Women.
ANDERSON, A. W., M.B., Ch.B. St. And., has been appointed Junior House Surgeon to Liverpool Infirmary for Children.
COPP, RICARDO, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Brighton, Hove, and Preston Dispensary, Northern Branch.
GUNNING, C. J. H., M.R.C.S., L.R.C.P. Lond., has been appointed Second Assistant Medical Officer to the Kensington Infirmary.
JUDSON, A. H., M.D. Toronto, has been appointed Clinical Assistant to the Chelsea Hospital for Women.
LEWIS, J. W., L.R.C.P [illegible] R.C.S. Edin., L.F.P.S.G., has been appointed Certifying [illegible] for the Brynamman District of [illegible]
PRING, H. REGINALD, M.R.C.S., L.R.C.P. Lond., [illegible] appointed Assistant Dental Surgeon to the National Dental Hospital.
SHEPHERD, J. HAY, M.B., Ch.B. Aberd., has been appointed Senior House Surgeon to Liverpool Infirmary for Children.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.
BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Assistant Surgeon.
BIRMINGHAM, CONVALESCENT HOSPITAL AND HOME FOR CHILDREN, Moseley Hall.—Honorary Acting Surgeon.
BRECON AND RADNOR LUNATIC ASYLUM, Talgarth, Breconshire.—Medical Superintendent. Salary £450 per annum, with house, light, washing, and garden produce.

Assistant Medical Officer, unmarried Salary £140, with board,

CR married

DA on, un-

DF Salary

DE er, m-

married

DUMFRIES AND GALLOWAY ROYAL

LISTER INSTITUTE OF PREVENTIVE MEDICINE—Grocers' Research Studentship Value £150

METROPOLITAN ASYLUMS BOARD ASYLUM, Darenth, Dartford—Male Assistant Medical Officer, unmarried Salary at rate of £150 per annum, rising to £170, with rations, lodging, attendance, and washing

METROPOLITAN ASYLUMS BOARD Male Assistant Medical Off annum, rising to £240, wit washing

METROPOLITAN HOSPITAL, Kingsland road, N E.—Anæsthetist. Hono

senior Assistant Medical annum, with apartments,

—Two Resident Medical respectively, with board,

L, London, W —House six months Salaries at esidence.

House Surgeon for six months Salary at rate of £60 per annum, with board, residence &c

QUEEN'S JUBILEE HOSPITAL, Earl's Court, S W —House Surgeon for six months, renewable Salary at rate of £52 per annum, with board, residence, and washing

House Physician and Physician and House

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E C —Resident Medical Officer for six months Salary at rate of £120

ST assistant Physician

ST, sr Fulham road, Medical Officer

rising to £200, and fees, with house, coals, light, &c

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried Salary £50 per annum, with board, washing, and lodging

TAU sistant Medical rising to £200,

Births, Marriages, and Deaths.

BIRTHS.

COLE.—On Oct 2nd, at Clarendon square Leamington, the wife of

GOR , the wife of R M

MARRIAGES.

JOHNSON—GRIFFITHS —On Oct 1st at St Peter's, Swinton, Lancashire, P to Ethel eldest daughter

LAZ

Edinburgh, on Oct. 5th, by t Robert Craig, D D , assisted by t Shillitoe Latchmore, bank mana Craig, M D

O HAGAN—LOGAN.—On Sept 27th at

k Egan Esq of The Hall, late Michael Moorehead, M.D , F.R.C S

RIDDELL—WILSON—On Sept 29th at St. James's parish church, Dover, Robert George Riddell M B , F.R C S Eng , D P H , Rotherham, to Annie, daughter of the late James Wilson, Esq

DEATH.

BOSSEY —On Sept. 27th, at Mayfield, Redhill, Surrey, Francis Bossey, M D , F R M S , aged 95 years.

N.B —A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"COST OF ELECTRIC AUTOMOBILISM."

As we receive from time to time letters on the subject of motor-cars for medical men the following extracts from an article with the above heading, published in the *Engineer* of Sept. 30th, may interest some of our readers It is written by Mr. Robert H. Smith and contains a variety of diagrams and formulæ.

The necessity of carrying the driving energy in the form of a storage battery makes the weight of the loaded vehicle great in ratio to its passenger or goods carrying capacity, and this puts a somewhat severe limit to the range of travel away from a charging station But 80 to 100 miles have been run on a single charge and 30 or 40 miles journeys may be accomplished with fair economy. The greater difficulty is the destructive influence upon the battery of the jolting and vibration unavoidable upon rough roads. The injury is primarily mechanical but the mechanical disintegration is severely detrimental to the efficient electro-chemical action upon which the reproduction in active form of the stored energy depends . . If the idea of long rural journeys be recognised as outside the useful sphere of electric automobilism, if its great convenience for urban and suburban traffic be realised, and if systematic organisation of re charging facilities be effectively taken in hand its advantages over petrol traction will stand out in better relief. The readiness to start without any delay at unexpected times, the avoidance of running the machinery while the car has to wait by the roadside for a few minutes, the ease of safe manipulation by unskilled hands, the smooth and even driving torque which saves so much in hammering and wear of the gearing, the comparative noiselessness, and the absence of smell left floating along the track,—these ought to count a very great deal in civilised urban life. No attempt will be made to make it compete with other forms of road traction for heavy wagon or omnibus loads, but without these there is a large open field in private carriages, cabs, and parcel vans for shop deliveries and postal service

The ampere-hour from below 4 up to 7 until the voltage fall so that the above 7½ n its efficiency may be 70 or 80 per cent , but it gradually falls to 50 or 60 The watt hours required per ton mile varies most with the up or down gradient, but also very greatly with the head or side wind, and with the style and muddy or sandy condition of the road surface It must also depend greatly upon the kind of gearing employed, upon its good or inaccurate manufacture, and on its condition of cleanliness and proper lubrication At six miles per hour on a smooth, hard, level road, without head wind, as little as 50 to 60 watt-hours per ton mile has been authenticated, but over 200 is often needed and 140 to 150 is generally assumed as the average An extra 45 watt hours exactly per ton mile is needed for each 1 per cent in the upgrade of the road Thus a grade of 1 in 12 = 8½ per cent , nee is extra driving work of amount 8½ × 45 = 382 watt hours per ton mile

At 150 watt hours per ton mile and ten watt-hours as the storage capacity per 1 lb of battery there would be needed 15 lb weight of battery for every ton mile of travelling duty to be done upon one re charge To provide for climbing at least an extra 5 lb may be added, making the allowance 20 lb of battery per ton mile If it were 22 4 lb per ton or 1 per cent , this would mean that a 100-mile journey would be just outside the range of possibility because

total load, inclusive of full passenger load, is from four to ten times that of the useful passenger load carried Good carriages without extra luxurious fittings may be bought for, say, £150 per 1000 lb in the weight of the carriage alone *plus* £60 per 1000 lb. in the weight of battery 20 per cent. per year may be taken as the sum of interest, repairs, and depreciation upon the car alone, exclusive of battery, and exclusive of tyre repairs and renewals 75 per cent is not too much to take to cover the similar battery costs on the assumption that regular daily use is made of the car The cost for recharging varies locally very greatly, but may be assumed at an average of ¼d per mile per 1000 lb. load . The daily cost must always be more than 105 pence, or,

THE FACTORY GIRLS' COUNTRY HOLIDAY FUND.

THE treasurer of this society informs us that he has received a subscription of 10s from a correspondent who wishes it to be acknowledged in the columns of THE LANCET under the initials "X. Y. Z."

POISONING BY PRUSSIC ACID.

To the Editors of THE LANCET.

SIRS,—I had on Monday what I think was a providential escape from sudden death by prussic acid and as the recoveries from that poison are, I take it, rare I thought, without being *egotistical, I might tell* you my symptoms. I had cut my right forefinger opening a vaccine tube and the wound bled rather profusely but I did not dress it. Later in the morning I was dispensing from the prussic acid bottle and a little ran over the wound. I had only just put the bottle down when I felt what I can only compare to a severe electric shock run up my arm to my heart and down both legs and I sank down on the floor, where I was compelled to lie for a minute. When I got up I called to my caretaker and sent her for brandy and she says I looked very white and I was trembling violently. I can put this down to nothing else but the prussic acid, as I am in the best of health, a young man, and a fair athlete. I am, Sirs, yours faithfully,

Oct. 4th, 1904. GRIFFIN WILKES.

THE "KOZY" COVERED FOOT-WARMER.

THIS foot-warmer is designed to minimise the risks of burning the patient's body and instead of being inclosed in a flannel bag, which in many respects is not a convenient plan, it is provided with a cover kept in position by a row of buttons which are part and parcel of the stoneware itself. Further, the bottom of the warmer is concave and the buttons are situated at the top of the curve so that there is no likelihood of the flannel cover getting detached or of being shifted. The warmer is neatly fashioned in stoneware and may be obtained from the New Lines Introduction Co., of 44, Adelaide-road, West Ealing.

VACCINATION PADS.

To the Editors of THE LANCET.

SIRS,—I am a public vaccinator and it occurs to me that being paid by British taxpayers' money I ought only to buy British-made "vaccination pads." Will some experienced public vaccinator name a good British-made pad for the benefit of those, like myself, recently appointed "public vaccinators" who wish to be patriotic?

I am, Sirs, yours faithfully,

Oct. 4th, 1904. INQUIRER.

"HOSPITAL SUNDAY FUN."

GROAT writes:—"In reference to the humorous remarks made by your correspondent last week under the above heading I should like to point out that according to his own showing the loss suffered by the Hospital Sunday Fund is happily infinitesimal. He says that the 'Fund' by the dropping of the last letter 'has 'been reduced by one quarter!' It has, however, in fact lost only one d (1*d.*), financially an altogether insignificant diminution."

LIVE WIRES.

To the Editors of THE LANCET.

SIRS,—Public attention has been directed by the daily press recently to a number of accidents, many of them fatal, caused by contact with exposed rails or cables used for the conduct of powerful electric currents. A rather curious case occurred a short time since in some large engineering works in the midlands which, however, fortunately was not attended with any serious consequence. The works in question consisted of a number of sheds to which low-power currents were conducted by uncovered overhead wires from a small central generating station for lighting and other purposes.

A visitor going on a round of inspection was accompanied by a small dog. The dog ran hither and thither with that pre-occupied air common to animals of its class. Suddenly its attention was arrested by a post up which an exposed electric main was carried. Pausing for a moment in front of the post the dog made a fluid connexion with the exposed wire, thereby creating a short earth current with remarkable effect. The animal was instantly thrown a considerable distance, immediately cutting the connexion with the wire, not, however, before it had received a most severe shock, both physical and mental.

I am, Sirs, yours faithfully,

Sept. 30th, 1904. K. E.

"LIGHT-TIGHT" BAGS.

WE have received from Mr. William Tylar of 41, High-street, Aston, Birmingham, some specimens of "light-tight" envelopes for use in x-ray work. They are very neatly made, durable, and strong. The "bag" consists of an outer envelope made of a dead-black material, dull outside and glossy inside. Inclosed in this black envelope is a smaller envelope made of orange-coloured material. They are obviously useful for preserving negatives, films, or sensitised paper.

A NEW DANGER IN THE DUSTBIN.

AT a recent meeting of the Wimbledon district council Mr. Rawcliffe, the chairman of the road committee, stated that a number of loaded cartridges had been found in dustbins in Wimbledon. The committee intends to issue a notice warning volunteers in the district not to adopt this dangerous practice which might result in injury to men employed at the dust destructor. Thus another danger is added to the deadly dustbin. We may mention that for some time past the dustcarts of the Westminster city council have had notices pasted upon them warning the public of the district not to put explosives into dustbins. Some little ti back an explosion occurred on a barge lying alongside one of t Westminster city council's wharves and caused injuries to seve of the workmen employed there. We are fast approaching t annual celebration of the "never-to-be-forgot" Gunpowder Plot a it is possible that some of the unused squibs and crackers may fi their way to the dustbin in addition to a few bad cartridges wh will not go off at the annual back-garden revolver practice which conveniently covered by the booming of Guy Fawkes' night. Peo in the habit of doing such things should be invited "to turn fr their wicked ways" "and repent in dust and ashes" while there yet time.

POST-MORTEM CÆSAREAN SECTION.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you could kindly inform r through the medium of THE LANCET as to the ethics of post-morte Cæsarean section. I presume in ordinary circumstances the conse of the nearest relative should be obtained, but in hospital practi where the relatives are not always at hand this may be impossib In these circumstances is the medical man justified in doi Cæsarean section? I refer especially to cases where the patient collaps and dies quite suddenly during or before labour.

I am, Sirs, yours faithfully,

Sept. 15th, 1904. R. S.

*** In all cases whenever possible the consent of the nearest relati should be obtained. When this is impossible and there is a chance saving a viable child alive post-mortem Cæsarean section should performed, always provided that the child cannot be delivered quickly *per vias naturales* after rapid dilatation of the cervix by Bossi's dilator or by multiple incisions.—ED. L.

O. G. S.—There are so many schools of cookery that we cannot unde take to say which is the best, but our correspondent will find that t National Training School of Cookery, 72 to 78, Buckingham Palac road, London, S.W., is a very good one.

N. J. M.—The fluid sent to us by our correspondent contains glycerin formic aldehyde, and phosphoric acid.

COMMUNICATIONS not noticed in our present issue will receive attentio in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.) [illegible]

TUESDAY (11th).—London (2 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M. [illegible] minster (2 P.M.), West London (2.30 P.M.), [illegible] (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, [illegible] ho-square (2 P.M.), Chelsea (2 P.M.), [illegible] (2 P.M.).

WEDNESDAY [illegible] .30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A. [illegible] (9.30 A.M. and 2.30 P.M.), Gt. [illegible] Central (2.30 P.M.), Westmin [illegible] London Throat (9.30 A.M.), Cancer (2 P.M.), [illegible] (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (15th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (10th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish square, W.).—8 P.M. General Meeting. 8.30 P.M. Ordinary Meeting. Mr. J Langton (President). Opening Address Paper —Mr. M. Sheild: A Case of Gigantic Renal Calculus, with

TUESDAY [illegible] W.).

S[illegible] lical [illegible]).— [illegible] ding [illegible] C. T. Harford).

WEDNESDAY (12th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos street, Cavendish square, W.) —5.15 P.M. Demonstration

[illegible]

T[illegible]

[illegible] treatment of Severe Prolapse by [illegible] gina.
Stafford rooms, Titchborne-street, [illegible] Mr. C B. Keetley On Plastic

Fl[illegible]

W.) —8.30 P.M. [illegible]
and Mr. V. W. [illegible]
by Nerve-graft[illegible]
Cases of Infla[illegible]
and Mr. R. Jo[illegible]
treated after Extravasation had occurred by Proximal Ligature

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

[illegible]

[illegible] Ir. F. Wallis: Lecture-

[illegible]

[illegible] Dr. Beever Cerebral

[illegible] COLLEGE AND POLY[illegible] P.M. Mr. J. Berry [illegible] enzie Graves's Disease

[illegible] Hospital, Hammersmith road, W.).—4 15 P.M. Dr. Beddard: Demonstration in Medical W[illegible]

[illegible] DISEASES OF THE [illegible] Mummery Clinical

THURSDAY [illegible] —GE AND POLYCLINIC (22, Chenies street, W.C.) [illegible] (Surgical) 5 15 P.M. Dr. [illegible]
POST-GRADUATE COLLEGE (1[illegible] h road, W.) —3 P.M. Dr. H[illegible] is 5 P.M. The Right Rev. the Lord Bishop of Oxford Opening [illegible] tration of [illegible] , N.W.) — [illegible] S OF THE CHEST (7, Fitzroy square, W.) —5 P.M. Introductory Address — Dr. G A Gibson (Edinburgh) Certain Aspects of Pleurisy (Post Graduate Course)

FRIDAY (14th)—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.) —4 P.M Dr W. J. Horne Clinique (Throat)
POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.) —5 P.M. Dr. R J Reece: Air Meteorology
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury, W.C.).—3 30 P.M. Dr Beevor Cerebral Anatomy and Localisation.

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METEOROLOGICAL READINGS.

(Taken daily at 8 30 a.m. by Steward's Instruments)

THE LANCET Office, Oct. 6th, 1904.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks at 8.30 A.M.
Sept 30	30 05	S		81	61	46	48	49	Foggy
Oct. 1	29 71	S W.	0·09	74	62	49	60	61	Cloudy
" 2	30 01	S W	0 13	63	57	46	46	47	Overcast
" 3	30 20	E	0 13	96	61	46	50	51	Raining
" 4	30 25	E		84	64	47	43	50	Foggy
" 5	29 93	S W		71	61	49	49	54	Cloudy
" 6	29 55	N.W	0·06	102	59	53	49	56	Cloudy

During the week marked copies of the following newspapers have been received:—*Carlisle Patriot, Yorkshire Post, Swansea and Glamorgan Herald, Dewsbury Reporter, Leeds and Yorkshire Mercury, Hertfordshire Mercury, Liverpool Daily Post, Leamington Spa Courier, Scottish Reformer, Surrey Advertiser, Beverley Recorder, Manchester Evening Chronicle, Oldham Standard, Sheffield Independent, Birmingham Post, Cardiff News, Birmingham Daily Mail, Liverpool Mercury, Manchester Dispatch, &c.*

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An Address

OF

INSANITY AND EPILEPSY IN RELATION TO LIFE ASSURANCE.

Delivered before the Association of Life Assurance Medical Officers on Oct 5th, 1904,

BY SIR W. R. GOWERS, M.D. LOND., F.R.S.,
CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

MR. PRESIDENT AND GENTLEMEN,—I have been asked to bring under your notice the relation to life assurance of insanity and epilepsy. I thank you for the honour done me by the request but I fear that I can do little more than help you to arrive at some conclusions by your own combined efforts It is only thus that confidence can be obtained The problems which these diseases present come but rarely under the notice of any single physician If there is one lesson which rings in our ears in every department of insurance work it is the paramount importance of the aggregate average I need not, indeed, remind you that it is on this that the whole system of life assurance is based, but it is easy to forget the fact when some striking incident makes a strong impression on the mind If it concerns a disease which rarely comes before us it is easy to allow its effect to sway us as it would not do if it were balanced and corrected by other observations The facts must be numerous to permit an accurate average to be obtained and, regarding the diseases I am asked to consider, a sufficient number can only be obtained by collective investigation The facts vary so much in character that classification is needed as well as collection, if any adequate conclusions are to be reached Hence it is necessary that the facts shall be as numerous as possible and also that careful scrutiny shall be given to their character and their significance Great weight may be attached to the opinions of physicians of large and long life assurance experience Yet the weight we give even to them may err if we do not know the facts on which their opinion is based Insurance work res
We are all prone to apply to
from this special department
so It is a necessity The greater the general experience of a physician the better are his assurance judgments Yet it is necessary that we should be careful to keep separate the assurance problems to some extent, because there are questions which are matters of special experience which cannot be adequately solved by general medical knowledge Therefore we should welcome the opinions which are held but we should also try to discern their foundation and not follow too blindly the authority of others, however great I express this caution with some emphasis, because the more I have considered the questions I am about to discuss the more I am inclined to distrust even my own opinions so far
knowledge alone You will
I proceed.
ses that are to occupy us this evening, I am sorry to find how little is the amount of personal experience I can adduce To be of value experience must consist of recorded facts Every member of the association must have found too often that the conditions under which our work is done are such as to preclude personal record of the facts and problems which come before us We begin by keeping careful notes of every case and confidently look forward to the time when the accumulated facts will make our experience as precise as it is extensive But soon the hurried days seem to get more numerous, the work is sometimes too great for note taking, and in a few years we experience the profound truth of Whateley's saying that "that which ceases to be habitual soon becomes habitual in its ceasing" Doubtless among your ranks there are some remarkable exceptions but I surmise that most of you have had to be dependent on the tables of facts recorded by the lay officers of the assurance company Assurance companies keep due notes of the general features of the cases which are dealt with, so far as they are needed for office work, but it is disappointing to find how impossible it is to obtain from these the information we frequently desire for the purpose of placing the medical problems of life assurance on a firm basis It may not be so with all offices but I think it is so with most I do not know whether the effort has yet been made by this association but it would be most desirable to make an attempt to secure the actual tabulation and classification of the facts of medical importance on a uniform system in every office, so that they could be ascertained for a series of years without much labour and without much time and could be easily combined and classified Such a scheme would be worth some trouble It should be simple and not elaborate, but I must not pursue this subject further

Unable to offer you original facts of sufficient extent I have been glad to have recourse to the valuable description of the medical experience of the Scottish Widows Fund from 1874 to 1894, which has been published by Dr Claud Muirhead, to whom everyone interested in the subject must, I think, feel grateful He has made the utmost possible use of the facts available, which, covering as they do a series of 9163 male lives, possess a value, I think, greater than that of any other collection of facts available to us

INSANITY

Although insanity and epilepsy are closely related in causation it seems convenient to consider them apart, at any rate, in the first instance Moreover, we must separate from insanity all cases of general paralysis of the insane This is rendered necessary by the facts of its causation to which I will presently refer The effect of its separation is great General paralysis causes far more loss to insurance offices than all the other forms of insanity taken together It probably causes ten times as many deaths and a still larger proportion of loss Indeed, it is surprising to what small dimensions the mortality of the assured from insanity is reduced when general paralysis is excluded The cases I have myself met with are too few to be worth mention In Muirhead's cases they numbered only 12, equivalent to 0 13 per cent Of the 12 cases, four of them exceeded their expectation of life and from the facts he gives regarding the others it is probable that the average loss in them did not exceed one fourth of the amount the office might have expected to receive, and if all the cases are taken together it is probable that the loss would be found to be very small

Can any actually insane person be accepted for life assurance on any terms? To that my own answer would be "Yes" I would not say that *any* insane person can be accepted, but there are some insane persons who may be taken, of course with a considerable extra without more risk than insurance offices run every day No sufferer from acute mania or melancholia could be regarded as insurable Perhaps many of you would say the same of any person who was under certificates But that some of any insane proposers may be safely accepted is shown by the case I am about to mention Just now I warned you of the danger of forming a general opinion from an isolated case But isolated cases have their value They may exaggerate what they illustrate but they may illustrate it all the same The largest relative profit on a single life which has come under my personal notice was on the life of a man who was a certified lunatic at the time of his assurance, under control in an asylum He remained so until his death The insurance was for £5000 with profits He was 28 years of age at the time it was effected and he was rated up 20 years He was 88 at the time of his death The sum which the office had to pay including the bonuses, amounted to £8000, but this left a clear profit of £46,000 The facts regarding the nature of his insanity are unfortunately meagre, he was insured in 1830 when reports were not so full as they are now, at least, as they are in many offices He is said to have been imbecile in consequence of epilepsy in early life He had then been for 12 years in the asylum in which he died 60 years later

This case affords a striking emphasis on the fact that some forms of insanity have little tendency to shorten life, and I think it would be very useful if this association could obtain from asylum physicians a definite opinion, or rather definite facts, of the risks to life in the various forms of mental unsoundness I expect such facts are on record if we can know where they are to be found Chronic imbecility, if not attended with deterioration of the vital organs, is certainly one of these, provided the patient's means are such as to

enable him to secure adequate care. You may have noted that this man was apparently the subject of acquired imbecility. I think that such are better lives than are congenital idiots, who often develop defects of vitality as life goes on. There are cases of paranoia in which a train of delusions has become fixed, has persisted in its limitation, and is innocent in tendency, who may also be regarded as insurable. It is only cases of what may be called settled, stationary insanity which can be thought of as possibly eligible. Cases of incipient, undetermined derangement involve too many uncertain risks and I do not think that a patient who has recovered from a previous attack of definite insanity is within the range of insurance. This is an important point on which opinions may differ and we shall all be glad of the opinions that are based on special experience. A previous attack is proof of personal liability and the precise character of a recurrence is often uncertain. When insurance is possible it can only be at a considerable extra. As a rule the amount of the extra does not prevent acceptance, the conditions which induce such insurance being compulsory. The amount of risk must always be uncertain and the terms should be such as to safeguard the office. I think a general rule, which may be taken as a practical maximum, is to reduce the expectation of life to two-thirds the average for the age and this is done if a number of years is added equal to half the expectation. For instance, at the age of 35 years the expectation of life is 30 years. This is reduced to two-thirds, 20 years, if half the expectation, 15 years, is added to the proposer's age. The rule will be found true at other ages which are within the usual insuring period of life.

What influence should be exerted by a family history of insanity on a life to which no exception can otherwise be taken? The affection of distant relatives would seldom receive consideration but the insanity of a parent, or of an immediate collateral, would prejudice the life to most offices. Yet I have grave doubts whether it is right to regard an otherwise good life as thus brought below the average. I think that there is a tendency to regard a family history of insanity as almost on a level with that of phthisis in its influence on the eligibility of a life. But I would ask you to consider what evidence there is to justify the opinion. In the very few cases of death from insanity which have come under my own insurance notice there has been nothing in family history to justify even suspicion. In the 12 cases [illegible] by Dr. Muirhead he expressly states that in not one [illegible] there any indication in the family history of a neurotic [illegible]y. I confess that this is surprising: it certainly suggests the need of a re-examination of the facts on an adequate basis in the light of the more careful reports of the present day. But it is important. On the other hand, a history of insanity in some near relation is not a rare thing in the reports we have to consider. I have not been able to ascertain how often it has been met with but I should think it would be much under the mark to estimate it as 1 in 50 cases—that is, in 2 per cent. But that would mean 180 cases in Dr. Muirhead's 9000. Since there was no family history of insanity in any of the cases in which this was the cause of death we must conclude that in the assumed 180 cases in which at least there must have been such a family history it has proved to be of no significance as regards the duration of life. If these cases had been rated up on account of the family history of insanity, and perhaps they were, the result shows that the rating up was without justification. Of course, this is extremely loose reasoning. I only put it forward as an attempt to discern the direction of the evidence available and not its precision. But when even loose evidence is in one direction it acquires considerable strength; and therefore I think it is most important to ascertain how far fresh evidence supports or changes the indications afforded by these facts. My own insurance experience has not been absolutely small but the facts bearing on this question which have come before me have been very few. Yet, as far as they have gone, they have been in harmony with the conclusion I have given. In the extremely few cases of death from insanity I have met with in insurance work there has been nothing in the family history to put the office on its guard, and I know of no cases where there have been such indications in which loss would have been avoided by attending to them. Thus I feel compelled to submit to your consideration the conclusion that in a perfectly healthy proposer no family history of insanity is ground for regarding the life as below the average, so far as death from this cause is concerned; that a previous attack of mental derangement, or any symptoms of present undefined mental disturbance, should preclude insurance, but that in some forms of established insanity a proposer may be accepted at a considerable extra without unreasonable risk.

The risk of suicide is another problem related to insane heredity. Suicide constitutes a serious cause of loss to assurance offices. In Dr. Muirhead's 9000 deaths no less than 127 were due to this cause—ten times as many as were due to mental derangement. Whether this is in excess of the general average we cannot say. Farr, in his "Vital Statistics," could only adduce the figures for 1838, in which the rate of suicide for the classes which furnish the bulk of assurers was only 5 in 10,000 annually. We do not know the proportion to the number living of assured in Dr. Muirhead's tables and so we cannot make the comparison. But a very important and significant fact is the large proportion which occurred during the first five years of assurance; it amounted to 17 per cent. It is probable that this under-represents the experience in England. Of the last ten claims from suicide at the Guardian office no less than seven were within the first five years. Of course, the total number is too small to be more than suggestive but it would be useful to note whether the experience of other offices is equally unfavourable. It is possible that the facts have been already published. Some years ago it was the custom that an insurance was invalidated by suicide after any length of time but I believe that it is now the general practice to limit the invalidation to the first year. But the number of claims which involve serious loss is such as to make it very important to know whether any indication of this danger can be discerned.

Personal mental depression of definite degree would, of course, constitute such an indication but proposers who thus suffer, or have thus suffered, are, I think, uninsurable on general grounds. In not one of the ten cases to which I have referred was this indication present or to be heard of. It is to the family tendency that we should be inclined to look for guidance but I have been surprised to find how completely this seems to fail. It is unfortunate that Dr. Muirhead has made no examination of the family history in the 127 cases of suicide he records. Their number would have made the evidence valuable. Of the ten cases I have mentioned in only two was there a trifling family flaw. In one case a brother died at the age of 52 years from epilepsy, in the other the proposer's aunt, aged 80 years, had been insane for 30 years. I do not think that, in your opinion, either of these facts would have prejudiced the life. In the other eight cases the family history exhibited no sign of any neurotic tendency. It is thus much to be desired that a more extensive collection of the facts regarding the family history of suicides should be made, and the combined efforts of the members of this Association should secure an amount of evidence of very definite weight. I can only regard that which I have given as an incentive to others. As far as the facts go they do not seem to make the risk of suicide any augmentation of the weight that a neurotic family history would otherwise receive. This conclusion also, I confess, surprises me. The facts seem to show that insurance suicides form a class apart. Insane heredity seems to take very little part in their production. They are apparently due almost exclusively to financial causes and imply a strength of will sufficient to enable this mode of exit to be adopted as an escape from the pressure of impending disaster or as a mode of insuring a secure provision for a family. In this connexion it is noteworthy that the suicide of an assured female is almost unknown. At least, I do not myself remember to have met with an instance. Yet females constitute in most offices nearly 10 per cent. of the assured.

EPILEPSY.

Epilepsy is also a rare cause of insurance claims. Dr. Muirhead met with it only in 40 cases or about 4·3 per 1000 deaths. He justly remarks that it is probable that some of these cases were not true epilepsy but organic disease of the brain, such as tumour. The average age on entry was 32 years, and by combining his three series it seems that the average age at death was 48 years. In no case was there any sign of the disease at the time of the insurance, although one of them is said to have presented a "nervous excitability of the circulation." In only two of the cases was there anything in the family history to arouse suspicion. The mother in one case had "some nervous affection" and in the other

and died in an asylum Thus, in only one case of the 40 was there heredity sufficient to merit attention On the other hand, the same consideration presents itself in the case of insanity, a large number of the remaining proposers who did not die from epilepsy must have presented some family history of it, perhaps in many cases such as to lead to an addition to the life which the result did not justify

Two other facts concerning epilepsy must also be taken into consideration One is that it is rarely the direct cause of death even to those who suffer from it It does, of course sometimes indirectly lead to death through accidents which it induces The influence is not always recognised Especially is it a cause of death by drowning, by falls and also by mysterious death during sleep I believe that when never a person is found dead in bed with his face against a pillow, death was the result of a petit epileptic turning over which causes the sleep after the convulsion to be deepened into fatal asphyxia In such cases the occurrence of nocturnal fits has often been unsuspected A second fact is important in estimating the weight to be attached to heredity The general age for life insurance does not begin until 20 years of life have passed but three quarters of the cases of epilepsy begin before this age Heredity is influential after 20 years of age as well as before, indeed the proportion of cases in which heredity can be traced only slightly lessens as life goes on But the absolute diminution in the number of cases commencing after the first two decades of life of course also reduces the effect of this influence We may estimate that of the total number of cases of epilepsy in only about one sixteenth is heredity effective after 20 years of age Moreover, in all these diseases we are unconsciously prone to transfer the blame to caught by the frequent reception of epilepsy from ancestors to its transmission to descendants Because in any given case of epilepsy, the chances are nearly equal or, at least 1 in 3 that it will be found that there is neurotic disease in the family, we are apt to think that the chances are the same that any given member of such a family will suffer It is needless, however to point out how unreasonable is the inference and how vastly it differs from the truth It would probably be more correct to say that the chances are about 1 in 6 that some child of an epileptic parent will present the disease and that if he has reached the age of 20 years without doing so the chances are perhaps 1 in 50 When to these is added the small influence of epilepsy on the duration of life it is evident that the risk to an office, even from parental epilepsy, becomes very small if a proposer over 20 has presented no symptom of it himself and the risk lessens with each succeeding year of life But it does not entirely cease and I need not say that which is insufficient alone to deserve weight may increase the effect of other unfavourable elements on the assessment of the life

There remains the question whether any proposer who actually suffers from epilepsy is insurable I need not remind you how necessary it is, at any rate in examining a member of a family in which there is a tendency to these diseases, to remember the disguises under which minor epilepsy lurks Occasional faintness thought nothing of occasional giddiness too trifling to be mentioned spontaneously, may mean definite minor attacks That which perhaps you may not know is that the same may be the meaning of momentary giddiness on sudden movement This is commonly dismissed as unimportant but it will often be found that those who experience this also feel sudden momentary giddiness when sitting still or walking quietly I think that the form of questions to be addressed to the patient by the medical examiner might wisely include, as they do in a few offices, a definite inquiry regarding faintness and giddiness Minor attacks have of course the same significance as severe seizures, which indeed they may sometimes conceal A few months ago a proposer said that he had suffered from occasional faints during many years which had been recognised as minor attacks of epilepsy They were only such to his consciousness But it was ascertained that his tongue was always bitten and convulsion must therefore have been invariable

I suppose no member of the association would accept the life of a proposer who was subject to frequent epileptic attacks, whether slight or severe But are all subjects of the disease uninsurable? That is really a matter of individual opinion For myself I think that some cases can be accepted, of course at a considerable extra if they have nearly reached middle life and the character of the disease has shown no tendency to become more grave As I have said, in Muirhead's 40 cases the average age at death was 48 years but they probably include many cases which were not idiopathic epilepsy Several of his cases exceeded the normal expectation I believe that selected cases of epilepsy would be found to reach an average age which could be met by a sufficient extra This opinion must indeed partly depend on the object we have in view of rating up lives Is it to guard the office against loss or is it to secure to the office an average profit on the lives equal to that which normal lives would afford? This is a question for the lay authorities of every office and I do not know whether it has been fairly considered My own impression is that in these days of competition it is sufficient to endeavour to secure an office from loss, leaving the average lives to provide the profit If so we may run a little more risk than if the object is to make all lives profitable Of course we must disregard occasional losses and hope that the future will show that the aggregate has given the required result

In rare cases I have sanctioned the acceptance of the life of a definite epileptic About 15 years ago a proposer was being examined by my then colleague and in the course of the examination he fell to the floor in a definite epileptic fit Inquiry made it probable that it was not the first, although the attacks had occurred only at long intervals There were special reasons which made it desirable to accept the life, if possible, and he was taken with an extra corresponding to that which I mentioned as applicable to some cases of insanity—an addition of a number of years corresponding to half the expectation of life reducing this to two thirds the normal This meant an addition of 15 years It is now about 14 years since the insurance was effected and during that time he has not I know, had another fit and I think it is now improbable that he will have another It is much more likely that the office will obtain a considerable profit from his life In this case of course the warning against inference from single cases applies but so also does the fact that they illustrate in nature that which they do not demonstrate in degree I need not say that insanity and epilepsy are interchangeable in their course through families In a family in which one has been prevalent, the other may suddenly appear But it is rather more common for the type to be maintained and for epilepsy rather than insanity to occur in families in which it is found I do not think that the fact that the diseases interchange increases the gravity of heredity I think that the sufferer from one disease thereby escapes the other as a rule The chief difference is that the danger of insanity does not lessen as epilepsy does, after the insuring age is reached

I may sum up the impressions which I desire to present for your consideration I say 'impressions' because the word conclusions would be far too strong to indicate that which I offer only to be tested I do not think that a family history of either insanity or epilepsy or both, as a rule need alone depress a life below the average if the proposer is over 20 years of age The word "alone" limits the statement to lives which are otherwise free from any flaw An influence to which no one would attach importance by itself may add sufficient weight to other features to necessitate an extra Moreover you do not need to be reminded that there are exceptions to every rule There may be cases in which a family tendency is so strong and is manifested so definitely in collaterals of the same generation as to compel its recognition In the case of the two diseases previous symptoms have a different indication In the case of insanity I think a previous attack should as a rule, preclude acceptance Whether there are exceptions is a matter for consideration Previous attacks of epilepsy are generally equivalent to the present existence of the disease In the case of each disease there are forms which if developed and stationary, may be taken at a considerable extra with out more risk than is often run by most insurance offices In the case of each however, the disease must have become established or rather I should say, stable, as a morbid condition presenting little likelihood of change Lastly, the danger of suicide is connected with both diseases, but the practical risk of insurance suicide is not so augmented by the inheritance of a tendency to either disease as to increase the risk of assurance sufficiently to receive practical recognition I may suggest an example of the evidence which it might be possible for the members of the association to bring forward If from every office represented were obtained the facts and fate of every proposer during the year 1870 who

presented a family history of insanity or epilepsy we should have some weighty evidence.

To leave general paralysis of the insane out of the consideration of the relation of insanity to life assurance may seem strange—the more so when I say that it apparently causes ten times as many premature deaths as all the other forms of insanity put together. In the record of the Scottish Widows Fund Muirhead recognises that this cause of death seems to have been recognised and designated adequately only in the last of his three septennial periods. In this it caused 52 deaths. If we ascribe to the two preceding septennial periods a proportionate number of deaths corresponding to the total number of cases in each we have a total of 120. This is ten times the number of claims from other forms of insanity. Further, it almost always causes a loss, often serious. This is shown by the cases that have come under my own observation and very clearly by Muirhead's facts. Of the 52 cases only one exceeded his expectation. The average age at death was 44 years. You all know what this means to the assuring office. Hence the question is very important—Can anything be done to lessen this loss? I regret that I think it would be alike futile and unwise to consider this subject to night. The essential problem depends on the fact that the place of general paralysis is beside tabes and not among the forms of insanity. The only possible means that could be adopted, at least so it seems to me, are the following: (1) to ascertain systematically whether or not there has been preceding specific disease; and (2) to ascertain the presence or absence (*a*) of the knee-jerks and (*b*) of the pupil-light action. The recognition of the early symptoms of general paralysis and the difficulties of its diagnosis are outside the scope of this association. No proposer who presents any suggestive symptoms, however uncertain, could be considered for a moment. The subject is thus a wide one, needing very careful consideration and discussion, and it is not within the limits of that which we are met to consider. Perhaps my feeling is the stronger because I despair of any result from the measures I have suggested, or rather I believe the evil of the attempt would more than balance the good. This opinion illustrates how difficult the subject is. I would therefore venture strongly to deprecate any attempt to discuss it this evening.

I have applied the term "impressions" to the ideas I have put before you. They are, indeed, but an attempt to give some shape and design to the subject, which as plastic I pass into your hands, and I shall look forward with interest to the form it ultimately receives from your discussion, should any form survive.

[The discussion on Sir William Gowers's paper was adjourned to Nov. 2nd and we hope to give a report of the same after that date.—ED. L.]

An Introductory Address

ON

KNOWLEDGE AND THE METHODS OF REACHING IT.

Delivered at the opening of the Medical Faculty of the University of Birmingham on Oct. 3rd, 1904,

BY P. H. PYE-SMITH, M.D. LOND., F.R.S.,
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GENTLEMEN,—Let me first congratulate you upon the progress which this great University has already made since it received its charter. Like Manchester and Liverpool it has left a connexion with the University of London which for so many years existed, and, as representing the parent body, I may say that we are convinced it was for our benefit as well as for yours. May Birmingham become as noted for learning and national progress as the greatest universities of our own or any other country.

If we look over the history of the connexion between the University of London and its colleges, we see the constant rivalry for importance between teaching and examining. In 1827, when a new institution was founded without the recommendation of age or wealth, with no traditions, and with sadly inadequate resources, there were two directions in which it developed—the one was that of conferring degrees and other academic distinctions only as the result of impartial and external examination; the other was to offer to intelligent youths opportunities for acquiring knowledge independently of wealth or of the trammels of scholastic discipline. At first there was no power to grant degrees, and when it was granted by the foundation of a new university in 1836 it was deemed necessary to separate entirely the teaching from the examining bodies. The whole course of public opinion in the 70 years which have since elapsed has greatly diminished the value attached to competition and greatly increased the value attributed to education as distinct from instruction. One criticism was expressed in the term applied to the University of a "graduating machine" and the other in the nickname applied to the University College of a "knowledge shop."

I think, and you here think, that competition is a valuable stimulus to work, and that many of us owe very much to the necessities of a curriculum; we also believe in the mere accumulation of knowledge, as we see it in clever children whose memory is always superior to their judgment and whose aptitude for imbibing information is as remarkable as their imperfect power of using it. We agree, therefore, that neither competitive examinations nor acquiring facts, even if unconnected, are to be discarded because they have been abused. But if we participate in the public opinion, which on the whole is educated opinion, we shall put before knowledge and before competition in the first place what is properly called education—the drawing out of the powers of the mind, the discipline which strengthens the mental sinews and prepares the intellect by a kind of gymnastics for the duties of which it is capable. Side by side, moreover, with the justly increased importance now attached to discipline and healthy development of mind and body we have also learnt to regard a college or university as a very imperfect instrument for good if it only educates its students and does not at the same time teach them to add to the sum of human knowledge. But these different aims (like other aims which are just and practical) are far from being opposed one to another. It is an admirable thing for the memory to be strong and tenacious. It is an excellent thing for a boy or girl to delight in omnivorous reading, to acquire the art of learning quickly, of discerning the main and important points to be understood, and to form fresh and tenacious receptacles for every new branch of knowledge which they encounter. It is well that by an honourable ambition young men and maidens should be willing to scorn delights and to live laborious days in the hope of attaining the fair garland which adorns the learned brow, and the very power which has been gained by such discipline is that which can be applied to investigation and expansion of knowledge.

I. First, then, of knowledge. A child learns to name objects, then he connects objects with qualities, and in time forms chains of connexion between related events. He learns that sugar is sweet and that fire burns. He learns to trust to the evidence of his senses and to measure distances not only by the eyes and the ears but by the muscular sense of the eye and of locomotion. Before long an intelligent boy is not satisfied with knowing that this or that is a thing with certain colours, shape, and movements. He asks himself how he knows it; and he soon learns that the perceptions of the senses are insufficient. He finds that the combination of two senses corrects mistakes and strengthens his assurance of fact. He learns to make allowance for atmospheric perspective, for the duration of movements and of visual impressions. He begins to detect various delusions into which observation by the senses will lead him. Before long he will have gained the important conviction that all knowledge derived from the senses is but mediate, that it is not the eye that sees or the ear that hears or the finger that feels, that touch and vision and perception of sound and pleasure and pain are processes of the brain, not of the sense-organs. They are states of consciousness and their continuity makes up the course of life. Even in sleep there are dreams and on awaking from sleep self-consciousness recognises the continuity of the time before and the time after unconsciousness.

So much for the development of knowledge by the senses. A further step is taken when a boy begins to reason. In following the propositions of Euclid, in learning the elements of logic, he sees how one fact inevitably depends

upon another. But an intelligent boy will soon observe that the beautiful sequence of argument in mathematics depends for its perfection on the absence of reality. A line without breadth, a point without magnitude, a perfect circle—these are not objects of the senses: they are figments of the imagination. Moreover, the student finds in the domain [illegible] to the defect of [illegible] the first premiss. [illegible] ning which ended [illegible] sorites, and the conflicting results of the arguments of nominalist and realist schoolmen led to the conclusion that, however excellent as a method of sharpening the wits, mere argumentation serves only as a sign of warning "No thoroughfare" by this path.

There is, however, as men at last learnt, another method of arriving at true results than that of tracing the intellectual sequence of ideas and stripping natural objects of some of their properties in order to deal with them as flawless imaginations. This course of investigation we call experience or, if we determine the experience for ourselves, experiment, and when experiment is repeated again and again and results are constant then we have on what seems sure ground the proof of the connexion between cause and effect. Moreover, there is a satisfactory test of the justness of our conclusions in the result of fresh experiment. When astronomers were able to predict eclipses they showed that their science was a real and trustworthy one, and so in the art of medicine the all-sufficient proof of diagnosis is the verification of prognosis.

Very soon in the education of the child it is desirable that he should, according to his powers, investigate, that he should try, as one clever child who was afterwards Clerk Maxwell tried, to find out the "go" of every plaything or machine that he observes. It is most important that he should be encouraged to search out for himself, and when he has succeeded in his quest he should be encouraged to remake the object which he has reduced to its elements. He should never be put off by explanations which are delusive; for instance, explaining the fact that one cannot see through a [illegible] acity of [illegible] lens and [illegible] cases we [illegible] tituting [illegible] remind [illegible] scientific men, the explanations of science always leave something else to be explained and carry us but a little way.

It is remarkable how slowly natural science or the investigation of the sequence of events has developed. Logic was familiar to Aristotle and the same great mind that produced the Ethics also produced a wonderfully full and, on the whole, accurate account of the animal kingdom. Aristotle had worthy successors in Archimedes, in Euclid, in Erasistratus, and in Ptolemy, but physics and geometry, anatomy and astronomy, died away with the general destruction of ancient civilisation. The "Physiologus" of the Middle Ages was a successor of Pliny, not of Aristotle. Natural history was not contrasted with natural science but with civil history. The first steps in what we now call science, the theory of the universe, the sequence and dependence of events, were made by the astronomers of the Renascence, by Tycho Brahe and Kepler and Copernicus, by Gilbert the father of magnetism, by Harvey and Mayow the physiologists, by Boyle the chemist. But the work of Newton and the early natural philosophers impeded rather than advanced the progress of medical science by leading to the Iatro-chemical and Iatro-mechanical schools. The pioneers of modern natural history were the collectors, the founders of museums of animals and plants in the sixteenth and seventeenth centuries. Their labours were scorned by philosophers and were treated by intelligent men like Addison and Johnson as laborious trifling. "The proper study of mankind was man," not as an animal or a machine, but in his mental and moral aspect. Even in the nineteenth century "scientific" was an adjective applied to what we now call learned. For three centuries natural history was valued only for its direct use in medicine or agriculture and even in our own day some ancient physicians spoke of morbid anatomy as useless in practical medicine and some scientific men lectured on the "Philosophy of a Candle." Physiology began with the "use" attributed to each several muscle or viscus and was more cultivated in the eighteenth century by surgeons than by physicians.

What kinds of knowledge are most essential for education, considered apart from their practical use? Technical education is an admirable thing, but whenever a boy at school is put on the modern side because he is intended to be a merchant or a druggist, his education for its own sake, his liberal education, has ended. He may go on if well grounded to an indefinite degree of excellence, but he has already begun the important task of providing for himself and those dependent on him. His science is *Butterbrod-Wissenschaft* and he feeds no more on ambrosia. A liberal education is that which brings no immediate profit, which is one from one point of view, useless; and whether a boy is taken from a board school to learn shoemaking, or whether he is taken from the broad curriculum of a public school to learn to be a medical man or a sailor, alike he has finished his liberal education and has begun that which is called technical. Of all kinds of scientific knowledge there are two which seem to me to be almost universally desirable as a means of liberal education. The first is botany, commended by the beauty of the objects with which it is concerned and their abundance in every country, by the need of careful and patient discrimination, by the opportunity and almost compulsion to carry on the interest of the study into mature life. A botanist never need be dull, whatever his trade and in whatever part of the world he lives. Moreover, it is the cleanest, the gentlest, and the least costly of all branches of science. On one ground or other it seems to me to be better adapted for most schools than zoology, anatomy, or geology. If botany is the most convenient and useful science to teach observation, may we not say that the study of physics in its elementary mechanical stages is the most valuable and convenient introduction to scientific reasoning? The actions of the levers of machinery and of those of our own bodies, the expansion and contraction of liquids and solids, the lifting and traction of weights, these are instructive and constantly applicable in daily life. They enable a boy to take an interest in machines of all kinds, to understand the construction and use of candles, of gas-jets, of electric lighting, of bicycles, and of motor cars. Such knowledge is practical and useful but it also enlarges the mind and adds greatly to the intellectual pleasures of life.

II. There is, however, another method of arriving at knowledge—i.e., at true results—which is distinct in method from those of either deductive or experimental science—I mean the knowledge of literature and of art. In what way can it be said that we know that the Iliad is a great poem, that the "Bacchus and Ariadne" is a great picture? Certainly no process of logical reasoning, no scientific investigation, can demonstrate the fact; and yet it is abundantly certain. The Iliad, as soon as we find it mentioned, was mentioned with admiration; it was admired by the earliest listeners, it was admired still more by the bright consummate flower of Athenian intellect in the time of Pericles. It was regarded with veneration by Virgil, by Horace, and by all great writers since. It only ceased to be admired when its language ceased to be understood; and with the revival of letters its glory has continued increasing rather than diminishing over the whole civilised world. Surely we may say with sober certainty that the Iliad is a great poem.

Again, Titian's paintings were reputed as of the highest excellence while he was living by all the painters of the greatest period. Successive generations have equally admired them and we may now say that ever since his paintings were produced, in all parts of the world and wherever art is cultivated, they are regarded as amongst the noblest and the best. Allowance must here and there be made for prejudice of various kinds, and there is always room for individual preference for this or the other among the greatest and most beautiful works of literature or of art. But the final verdict rests with time, that is to say, with the unchanging conviction of those who are best qualified to judge.

Here, again, we have the final test which gives its sanction to the conclusions of science—the power of prediction; for we would say to anyone who refuses to bow the knee to the masterpieces of classical literature or Italian art, study the subject, make yourself familiar with the writings of Greece or the paintings of Venice or the music of Germany; learn to write yourself or learn to draw. As you gain knowledge and gain skill you will, we can prophesy, feel more and more admiration for the masterpieces of literature or art; and this prophecy has never yet been found to fail.

III. May we not say that in another region of human thought the same certainty of conviction may be gained by practice and by action? May we not say that though it

cannot be proved that truth is better than falsehood, or virtue than vice, yet these conclusions are held more and more firmly by those who daily become better qualified to judge; and that if anyone denies them we may appeal to his conscience—that is, to himself—to bear witness against him. No argument, however subtile, can prove the truth of such beliefs, no experiment can demonstrate their reality; but they are held by all who act in accordance with them, and the longer and more perfectly they are acted on the stronger and more absolutely are they believed. Some ears cannot appreciate the music of Beethoven, some minds have no pleasure in the poetry of Milton, but all can understand the goodness of the great soldier who died at his post in Khartoum, who, unlike most men, "did not wish for money and did not fear death," or the self-sacrifice of the humble priest who deliberately undertook a fatal duty and gave up his life for the lepers of the Pacific.

IV. May I, in conclusion, offer some adages (*ad agendum apta*) which may possibly be of service to those who are students? Learn to use your senses, be quick to notice any changes in the house you live in, or in the clouds and sky, open your eyes to sights of birds and insects as you walk, your ears to their songs, and your heart and intellect to the impressions of nature. Look as well as see, listen as well as hear, touch as well as feel. Practise judging distances and making allowance for different kinds of illumination, learn to detect the optical and sensory fallacies of which you read in books on mental physiology. Exercise not only your muscles but your power of discriminating weights. Cultivate walking and make it a pleasure as well as a convenience. Take every opportunity of learning any bodily exercise, whether riding or swimming, rowing or sailing, and whatever you do do it, as Fox said he did, "with all your resources at the time." Learn, as you may very well without being artists, to draw sufficiently to explain your meaning. Cultivate your memory, form the habit of recalling things at the proper time, and make provision for spare minutes in the day or sleepless hours at night by fixing poems in your memory, or by repeating the geological strata of England, the atomic weights of the elements, the heights of mountains, or the dates of the decisive battles of the world. Never fear filling your mind too full of fresh knowledge or suppose that one fact will displace the other, as water poured into a full vessel adds nothing to its contents; for the more the mind receives the more it will contain, and there is no limit (or none that we ordinary people can see) to the growth of knowledge so long as life endures. Never be satisfied with a sham explanation or with conventional reasons or with argument that will not stand criticism. Beware of the commonplaces of argument, of declamation, and of assertion. Never waste time over worthless literature and in order to be sure of what is good read chiefly that which has withstood devouring time and remains to us as the carefully winnowed and approved result of the imagination, the wisdom and the wit of past centuries. Beware of prejudices, prejudices of your profession, prejudices of your education, prejudices of your country. Remember that all that you think of England, and which you rightly ought to think, is also thought by French and Germans and Americans and Hungarians and Chinese concerning their own country; the strength of its inhabitants, the beauty of its women, the courage of its soldiers, and its excellence in all the arts and refinements of life. It is not without reason that Frenchmen speak of *La grande nation* and Germans of *Deutschland über alles*, but such phrases do not lend themselves to translation. Remember that in the important department of popular education little countries like Saxony and Scotland were for many years far ahead of larger and wealthier nations. And of all nations since the Reformation the most remarkable achievements in war and in navigation, in exploring and colonising, in art, in learning, and in science, have been gained, not by the great nations, but by the little people of the Netherlands.

Here in Birmingham you are rightly proud of your municipal record. Just as this civic emulation does not diminish but strengthens your national patriotism, so believe that the glorious history of these little islands does not need disparagement of our neighbours. By knowledge of their history, their science, and their literature, by sympathy with their great qualities, we become more fair-minded, more liberal, and more humane. In literature, in science, in manufactures, in pathology, in preventive medicine, our fathers have left us a noble heritage; let it be ours to hand on a still nobler one to our children.

An Address

ON

THE RELATION OF THERAPEUTICS TO OTHER SCIENCES IN THE NINETEENTH CENTURY.

Delivered at the International Congress of Arts and Sciences at St. Louis, U.S.A., on Sept. 24th, 1904.

BY OSCAR LIEBREICH, D.C.L. OXON., M.D. BERLIN,

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GENTLEMEN,—Every political historian will prefer to trace the development of a period of history from one distinct event. A chronological introduction cannot be of such importance to him as historical survey, in which events of great moment form the basis of a new development. What is true of political evolution applies also to the growth of every branch of natural science and medicine. The first year of the century, though filling men with joyful confidence and new hopes, has not the same attraction for the investigator; and yet, in order to obtain a general view of the growth of the different branches it is desirable not to lose sight of this idea but to consider all the stages of progress in common from a certain point of time and thus the study of the history of therapeutics must also be subordinated to this aim.

Although the evolution of the nineteenth century has frequently been threatened by heavy political clouds we have seen them often pierced by the sun of progressive science which, especially in that century, has called forth a fertility of culture such as has scarcely been witnessed in any previous period of 100 years. The past century more than any other has been distinguished by the multitude of newly discovered facts in natural science, as well as by the perfection and extension of the ideas of great discoverers of the previous century. It is the age in which the greatest progress in natural science has been made. The vast numbers of new discoveries in medicine have lessened, or even almost suppressed, on the part of many persons, the feelings of admiration for each new acquisition. The new phenomena and experiences which confront us on all sides surpass the wildest dreams described in former centuries as the eccentricities of fanciful minds. The abundance of material compels our admiration and allows the astonished eye no time to gaze long at one occurrence, for new impressions already crowd it out.

The nineteenth century has spoiled us; our demands for new acquisitions increase and we grow impatient to know more. In this unsettled state the laborious work of the individual often seems lost but the true scholar is buoyed up by the gratifying knowledge that mighty buildings can only be constructed of a mosaic made up of single stones. Yet, truly, humanity often settles down in a new building without admiring either the work of the architect or his material. Moreover, the capability of enjoying nature and whatever we have added to our knowledge of the universe by laborious experiments does not appear to be a natural gift of man. Only education and culture can awaken the enjoyment of what is and of what is about to be. Mighty natural phenomena, indeed, fill the casual onlooker with admiration but the observation of what is harmonious in nature and the capacity of assimilating it for our own culture can be gained only through education. This also holds good of art and it is even more difficult in science. Since the uneducated majority is often inclined to pass by the greatest events with indifference the nineteenth century has spared no pains to inform humanity of all the great innovations, to educate them, and thus to gain friends for the progress of civilisation. This, indeed, is the object of your congress.

There are various ways in which therapeutics (and it is here chiefly a question of pharmacodynamic therapeutics—that is, such as concerns itself not with mechanical means but with chemico-physical processes) may develop. New knowledge of the conditions of life of the organism often leads to remarkable discoveries in therapeutics. Thus

[illegible] functions of the different organs, [illegible] for the progress of therapeutics [illegible] furnished by digitalis Originally this plant was simply a popular remedy which, like many substances in use among the people, proved efficacious in the case of many diseases while of course, of no avail in others When William Withering in 1785 undertook a careful examination of digitalis it was used for phthisis, dropsy, and scrofula, it is true, and its power of slowing the pulse was known but was not utilised therapeutically A proof of how little significance was attached to these purely clinical experiments may be found in the changes as to the admission of digitalis to the London Pharmacopœia In the year 1721 it was included, in 1746 rejected and not re accepted until 1778 Now in the year 1846 Weber made the surprising discovery that the vagus nerve has an inhibitory influence upon the heart—that is that exciting this nerve causes slower pulsation and that cutting it occasions extreme acceleration of the action of the heart This decisive experiment formed the basis of Traube's clinical investigations and he was able to prove that the effect of digitalis on the heart corresponded to the excitation or section of the vagus nerve This fact has been utilised clinically in diseases of the heart arteriosclerosis, and dropsy—and now upon a firm basis—so that digitalis has emerged from its former position of uncertainty and taken a place among the efficient and trustworthy remedies and we can safely say that it will not again disappear from the pharmacopœia—at any rate, not owing to any uncertainty as to its effects

Such investigations have now been undertaken with a number of other preparations and on a large scale such as for instance, the clinical researches of Sir Lauder Brunton on 'cascara' (erythrophlœum) and of Sir T R Fraser on strophanthus hispidus, a plant similar to digitalis but differing in its effect on the vaso motor system and which was also soon adopted in therapeutics Much the same may be said of atropine which, chiefly through the knowledge of its physiological effect on the iris on the non striated muscular system and the glandular secretions affords us an exact indication of its scope of utility in disease Thus we have here a source of fresh observations Often the functions of the organism are affected in an isolated manner that we should scarcely have thought possible—for instance, by yohimbin This physiological method is applicable to all chemical bodies and the progress in our knowledge of curative powers depends solely on the progress of experi[illegible] r does [illegible] for it [illegible] marked by various scientists as early as the middle of the eighteenth century and shortly before the beginning of the nineteenth [illegible] cker expressed this view in his [illegible] —i e in "the theory of the com[illegible] he human body and its different parts in an abnormal condition '

How differently we may view physiologically active bodies can best be seen in the blood But here, too we observe that a rational system of therapeutics only became possible in the nineteenth century after a knowledge of the physiological effects had been gained Berzelius was the first to recognise the presence of iron in the blood The discovery of a ferruginous colouring matter of the blood hæmoglobin did not follow until much later It is true that in 1854 Wohler declared globulin and hæmatin to be contained in the blood corpuscles But Funke (1852) and Lehmann (1853) had already established the fact that the colouring matter of the blood hæmoglobin, is a distinct crystallisable substance which is capable of absorbing and giving off oxygen Hæmoglobin we may say is, to a certain extent, the quintessence of the respiratory activity This function may be destroyed by inhaling carbonic oxide which enters into so close a combination with the colouring matter of the blood that its respiratory function ceases Thus blood in such a state is a menace to life which cannot be obviated by any drug but we are able since the respiratory function of the blood has been understood to avert this danger in most cases by removing the poisoned blood and transfusing fresh blood The greatest hopes for the further development of therapeutics are raised by the fact that chemical substances are capable of restoring pathologico physiological processes to a normal state Here we may cite the antipyretics, which are able in the most striking manner to reduce to the normal state a rise of temperature—that is, a febrile phenomenon The drugs just mentioned are therefore of great importance in therapeutics as symptomatic remedies Of course, they are in no way able to destroy the cause of disease but merely alleviate or avert injurious symptoms For the physician however, this very quality is of paramount importance in the majority of cases The cause of disease may disappear through the spontaneous healing process of the organism, while the symptoms are removed which had they been left alone would inevitably have led to the death of the patient Yes, we may say that it is one of the greatest aims of therapeutics to treat disease symptomatically, for we must endeavour to ease the sufferings of humanity and the great advantage of this method of healing becomes specially evident when the cause of sickness cannot be destroyed by any remedy hitherto known This may best be demonstrated in the treatment of poisoning If, for instance through a mistake or for any other reason a deadly dose of strychnine enters the system the sufferer will die under the symptoms of suffocation caused by the convulsive contraction of the respiratory muscles As however we are enabled to arrest this spasmodic contraction by means of chloroform, chloral hydrate and other drugs we can thus give the system time to eliminate the strychnine causing the illness This being entirely thrown off the morbid phenomena also disappear and complete recovery soon ensues It is possible though as yet unknown that purely symptomatic remedies may also influence the cause of disease

At the beginning of the nineteenth century chemistry was still of little service to the science of medicine True [illegible] n regard to metabolism in the [illegible] , that the oxygen of the air [illegible] nhaled accomplishes the same object in the system This must have given medical men an entirely new perception of the processes of life but the time had not yet arrived for experimental work on this subject Even at that time numerous elements were known 30 in number whereas at the end of the century 76 elements had been found A number of these elements were made use of in therapeutics in a pure state or in combination without our being able to base their application upon rational theoretical hypotheses as, for instance in the case of iron and its compounds, the use of which extends to the remotest times On the other hand, there were among them elements employed as drugs, such as antimony, which first came into use in the Middle Ages and which may be cited less as a proof of the therapeutic value of this metalloid than of the antiquated prejudice of a French faculty which absolutely refused to acknowledge any 'drug' owing to its predilection for blood letting The rage of dogmatic physicians may be recognised in the words of the anathema against Torpet [1]

On the other hand the science of therapeutics placed great hopes in the isolation of alkaloids which marked the beginning of the century This era began with the recognition of the importance of morphine by Sertuerner in the year 1804 Then followed the discovery of nicotine by Vauquelin in 1809 quinine in 1811, cinchonine in 1820, and of strychnine in 1818 This at any rate suggested the method of obtaining from extracts frequently encumbered by useless matters the active principle, and making it available for therapeutics, and hence a certain practical utility must even nowadays be accorded to pharmaceutical chemistry As regards a knowledge of the mode of action however the problem not only lies in the chemical composition and recognition of the substance employed but also in the chemism of the organism Outside the organism it is a lifeless substance but in the system it is not only the substance itself but its metabolism and manner of action which must be taken into consideration The theory of metabolism can only be of decisive value for therapeutics when not only the properties of the drug applied but also the chemical action of the organism are so far known as to enable us to judge of their mutual effect For this reason [illegible] human system [illegible] eviously to the [illegible] which appears [illegible] in well formed crystals in the human organism was discovered by Fourcroy and Vauquelin This fact certainly did not appear so strange since crystalline matters had already been obtained from plants but even in the beginning of the century the idea was still firmly rooted

[1] Cf O Liebreich Die Historische Entwicklung der Heilmittellehre, Lecture Berlin 1887

yet derive the most varied hypotheses from it. In pharmacodynamic research we may uphold the same principle which Claude Bernard expresses—namely, that by promulgating a hypothesis we are led on to experimental research the solution of which may be of the greatest importance. G. Gore expresses his opinion in much the same way: "A discoverer is a tester of scientific ideas; he must not only be able to imagine likely hypotheses and to select suitable ones for investigation, but, as a hypothesis may be true or untrue, he must also be competent to invent appropriate experiments for testing them and to devise the requisite apparatus and arrangements."

The science of therapeutics quite properly does not follow a one-sided course but seeks aid in all directions, and since the results of the exact natural sciences are not yet ripe to guide us clearly we must take into consideration what has been gained by practical experience for it would be a false principle to condemn popular medicines without examination. At the beginning of this lecture the successful application of digitalis was already mentioned. And here we must not entirely neglect the historical side of empiric observation. Frequently even the most absurd practices are based upon theory. When we turn away in disgust from the unclean excretory products of animals used in ancient times and by Asiatic nations, which we now regard as the very outcome of folly, we cannot ignore the fact that even this practice was founded on theory though a false one. This is proved by Pliny who tells us that animals eat and digest plants, but the medicinal part is not absorbed by the organism but excreted, for which reason the fæces contain substances curing human ills. These prejudices remained for centuries, as is proved by Paulini's book published in 1697, but which can now be read only with disgust. Such excretions as musk and castoreum, which are undoubtedly of value, should by no means be rejected. But particularly the nineteenth century has directed attention to the question, whether the products of the organs themselves or certain substances contained therein might not be employed as remedies.

It was no easy task for Brown-Séquard to prove that the principles contained in the testicle of animals exercise a stimulating and exciting influence on the system. The discovery of spermin crystals, their occurrence in various organs, and the decidedly stimulating effect produced by these substances reminded physicians that creatin, which had already been obtained from meat extract, had an effect similar to that produced by the salts of potassium on the animal body. This, as we may say, weak connecting link yet led to the further development of a principle in therapeutics. Medical chemistry has already succeeded in obtaining from the organism substances which may be of the greatest importance for therapeutics. You all know the effect of thyroidin on the system. Obviously the active principles here are albuminoid bodies, the peculiarity of which has already been partly explained by Baumann in that iodine is one of their component parts. Probably no one would have imagined that this element must be regarded as one of the constituents of the human organism. The very much studied question of the constitution of albumin will naturally lead to a more exact knowledge of the different kinds of albumin which are of value therapeutically and open a new field of observation to pharmacology. The most surprising feature in the action of substances of the organs is presented by the constituent of the suprarenal capsule, adrenalin, not an albuminoid body it is true. In order the better to illustrate the importance of the new domain the following pharmacodynamic experiment may be mentioned. Doses of cocaine which are absolutely fatal to animals are easily borne in the presence of adrenalin without any injurious effect whatsoever. These substances, as they are found in the body of animals, are certainly of importance for the life-processes themselves. Taken from the animal body they have the same effect as the human product and can thus be employed as curative agents in man.

But medical chemistry had already undertaken researches which were not indeed utilised therapeutically at once but came to exert great influence on therapeutics. In 1869 Zuelzer and Sonnenschein proved that alkaloidal bodies may be formed by the decomposition of the organic substances of the organism and later the theory of toxins was derived from this observation. This, again, has led to von Behring's remarkable and far-reaching theory of the anti-bodies formed in the organism.

How to make the substances obtained from the bodies of animals useful for therapeutics depends upon the state of our physiological and chemical knowledge, and especially on the train of ideas arising in connexion with these subjects. This can be seen, for example, in the case of the esters of cholesterin, the composition of which was already discovered by Berthelot, but not in connexion with biological investigations. On the other hand, cholesterin esters had been observed in the form of wool-fat and the impure product was used medically and cosmetically even in ancient times for its curative powers. It was proved that a functional significance as regards the animal organism must be attributed to cholesterin esters, for they are present in mammals, birds, and all creatures whose external surface is of keratinous character. They give lustre to the skin but act chiefly, so to say, as a protective varnish. The white substance of newly-born children is therefore very properly termed cheesy varnish (vernix caseosa). It was formerly thought to consist of glycerine fat but it is actually composed of cholesterin esters. The higher members of these esters are characterised by the physiological properties of wax. Gottstein has shown that this substance offers no food for microbes, is very stable, difficult to saponify, and not decomposed by the oxygen of the air, as are other fats. Thus it forms a protective matter, especially effective by reason of its waxy nature, and this has led to the production and application of therapeutic substances similar to cholesterin ester, as, for example, fetron.

The influence of pathological anatomy on therapeutics belongs entirely to the nineteenth century. To John Hunter in England and Bichat in France belongs the credit of freeing pathological anatomy from the brainless descriptive scientists and of forming it into the necessary basis for every form of progress in therapeutics. From this time until Virchow's labours, the decisive importance of which is recognised impartially by all nations, pathological anatomy has exercised a great influence upon medical activity. Cellular pathology especially, in spite of all former battles and present attacks, will form the basis of every experimental and therapeutic observation, though some of the views concerning it may undergo modification through the progress of science, and opinions which Virchow himself could not accept may be brought forward again. The scientific question which appeared as a result of cellular pathology is the question of the cause and symptomatology of disease. Nothing can be more suitable in treating this question than to quote Virchow's own words: "An elementary pathological process in the sense of cellular pathology appears thus: an external influence acts upon a living cell and alters it in a mechanical or chemical way. The external influence is the causa externa, or as we simply express it, *the cause of disease:* the altered condition is called passio, disease. If now, in consequence of the change undergone, an action (actio s. reactio) takes place in the living cell, this change is called a *state or irritation* (irritamentum), and the cause of disease irritans. If, on the other hand, *no action ensues, if the condition is limited to the* change "suffered" by the cell, we have to do with a mere disturbance (laesio) or *paralysis.* Since, however, the same cause can evoke irritation in one cell, merely a disturbance in another, and even paralysis in a third, we assume a certain difference of the internal arrangement to be the cause of this varying behaviour. Thus we come to the internal cause or predisposition." But these words spoken in 1880 must be modified according to present experience. According to Virchow the causa externa is the cause of disease. The irritant acting upon the organism is in all circumstances the morbific factor according to this assumption. We do not wish to play with words. If, indeed, this foreign intruding agent produces a destruction of the cell power or a morbid modification of it, it obviously must be regarded as the actual cause of disease. But when, for instance, we see that the invading body produces only an entirely *local irritation*, or, although capable of reproduction as is the case with bacteria, no proliferation occurs, it becomes difficult to consider the same factor as the cause of disease in all instances. Virchow terms this phenomenon of indolence of the cell towards the intruder a want of predisposition; according to the school of bacteriologists, however, the cell is not a culture medium in the given case. We see from this explanation that Virchow himself assumes the cell power to be variable and we can quite logically and correctly say that by the term disease—i.e., nosos—is designated that condition in which the external irritation can accomplish the defeat of the cell.

Von Hansemann has shown from a pathological and

matomical point of view that in cases of diabetes mellitus and other diseases the tubercle bacillus involves secondarily the lung Von Hansemann calls this disposition, but we must certainly first of all term it nosos, since it is a question of proved deviation from the normal This can also be illustrated by experiments In a frog anthrax bacteria do not proliferate As soon however as we place the animal in an incubator—i e, weaken the cell power by heat—we are able to make the animal susceptible to the inoculation of anthrax In this case the parasite is only a parasite of the diseased cell and this kind of infection I have termed nosoparasiticism Thus we must describe as "nosos' the molecular change which we can no more observe through the microscope than we can the course of a chemical reaction, the outcome of which we judge only by the result The cell is subject to the same vital fluctuations as Brown has assumed for the organism The Brownonian theory has had no special value for practice, it is true, because at that time it was impossible to base a system of therapeutics on these observations so as to be of practical use But it must be acknowledged that his theoretical deductions can be applied to the vitality of the cell This theoretical explanation is, in all circumstances of decisive importance for therapeutics and already physicians are beginning to direct attention to this view in the study of therapeutics Thus A Menzer says 'The solution I have attempted to give to the question of the etiology of acute articular rheumatism is derived from the theory of a correctly interpreted nosoparasiticism This question has grown to be of special importance for pulmonary phthisis We cannot here enter into the subject of infection by tubercle bacilli, only one thing is certain—namely, that the bacillus is destroyed if the cells become healthy and only does harm when the cells are diseased Even before the discovery of the tubercle bacillus this fact was proved by dietetic and open air cures, as described in the excellent work of the two Dr Williams father and son and Freund, again, has shown lately that the functions of the tissue of the lungs are impaired by abnormal immobilisation of the first rib and that then the tubercle bacillus can begin its work

xdynamics teaches that there
acrely act specifically upon a
the formation of bone but
s such as cantharidin, which,

without themselves having any effect on the bacteria, can bring about the cure of diseased tissues so that the nosoparasitic bacilli are destroyed But here begins a branch of science which, like the theory of immunity and serum therapy, occupied the end of the nineteenth century and the waves of discussion still run so high that it is as yet unsuitable for a historical survey Let it be said that these investigations of the present century afford us a guarantee that we are following the road of progress in therapeutics

Abstracts

OF

INTRODUCTORY ADDRESSES, ETC

DELIVERED AT THE

MEDICAL SCHOOLS

AT THE

Opening of the Session 1904-05

VICTORIA UNIVERSITY OF MANCHESTER

INTRODUCTORY ADDRESS BY WILLIAM STIRLING M D, LL D, PROFESSOR OF PHYSIOLOGY AND HISTOLOGY DEAN OF THE FACULTY OF MEDICINE, VICTORIA UNIVERSITY OF MANCHESTER

IN opening the course of physiology Professor Stirling gave an address on Salerno the Oldest Home of Medicine in
ime of Horace Salerno
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and the later discoveries of P Giacosa a great deal was now known of those who taught, and what they taught in the oldest school in Christian Europe in which medicine was 'taught, professed, and practised" Whether it owed its origin to clerical or secular influences it was in its best days a lay institution Thus early had medicine in Salerno freed itself from the influence of the clerics The policy of the Lateran prevented Italy from becoming a united kingdom under the Lombards and thus left Southern Italy an easy conquest to those virile warrior Normans the sons of Tancred de Hauteville who had conquered Apulia before the middle of the eleventh century Robert Guiscard 'the Wily' in 1060 obtained amongst his new possessions the science of Salerno' and he did all he could to foster the prosperity of his capital His successors especially Roger the Great Count of Sicily, and Roger II conferred many privileges on the city and the latter framed a code of laws regulating the practice of medicine These laws took a more definite form under the autocratic Frederick II in the thirteenth century who forbade the practice of medicine in his dominions without a Royal licence given after examination in the King's Court by the Masters of Salerno The Masters of Salerno conferred the degree Thus Frederick guarded carefully against any interference by the Church and made himself the source of all real power In this regard the Faculty of Salerno differed greatly from the faculties of medicine of Bologna and Paris About 1140 the first State examinations for a licence to practise medicine were instituted The candidates had to follow a prescribed course of study the object being to protect the laity from the dangers incurred through the ignorance and inexperience of the physicians Frederick II was indeed a great law giver and spoke of himself as 'law animate upon earth The student had to give his attention for three years to logic and after these three years he had to study medicine for five years, and if he wished to be a surgeon he had to spend an additional year in studying the anatomy of the human body and thoroughly to be experienced in the way in which operations were successfully performed and healing was brought about afterwards To this end Frederick commanded that a human body should be dissected once in five years Previously to his time students had to be content with the anatomy of the pig as set forth in the work of Copho the younger One of the years of study had to be passed under an experienced physician
a period of clinical instruction—
an apprenticeship—the scholar
on his daily rounds Frederick

also made important ordinances for the preservation of the public health He ordained that graves should be dug a certain depth that hides and carcasses of dead animals must be thrown into the sea or into a river at least a quarter of a mile from a town, and that slaughter houses must be erected outside the city walls His laws relating to druggists and apothecaries were specially stringent both as regards the price of drugs and their adulteration which seems to have been prevalent even in those days Even the number of the physician's visits and the payment per visit were regulated After graduating—i e after laying his hand on the closed and then the open book and his betrothal to medicine by the ring—the graduate was crowned with laurel and dismissed with a kiss of peace Frederick also took care that every applicant should be a 'loyal subject The term 'magister' was the earliest title used and the first mention of 'doctor in physica' Renzi found to be in 1200 A D

Not the least remarkable of Salerno's claim to honour is that she admitted the fair sex to study in her school and granted to them after due examination the title of magister or doctor of medicine The Breslau Codex makes it plain that the famous Trotula or Tortula—probably the wife of Joannes Platearius the prior or præpositus of the school—wrote extensively not only on gynæcology and allied subjects but also on many diseases not directly connected with this subject Many articles by her are given in the famous second article of the Breslau Codex entitled "Tractus de Ægritudinum Curatione which belongs to the latter part of the twelfth century and is the first encyclopædia of medicine dealing with all subjects save surgery Not the least interesting of the tractates in this codex is that of Archimatheus (1100) 'De Adventu Medici ad Ægritudinem Libellus' The ethical code therein laid down would hardly in all respects meet with the approval of the Royal Colleges of Physicians of to day but it throws a remarkable light on the status and practice of the profession at that time

the country on political, ethical, and other subjects, how they are ministers and lawyers in the United States of America and foreign countries, although not in England. Join a suffrage society and realise that when men and women coöperate in the work of a nation that nation really succeeds. Join the debating society and speak often at the meetings. Avoid having your mental balance upset by a spirit of pessimism that there is in the air. Yet I would not have you optimistic; let us see our faults and mend them; choose the via media. Hear a good lecture or sermon every Sunday but carry your Sunday spirit into every day of the week. I need not warn women students against alcohol; it is not one of their sins, but your bodily and mental vigour will be at a much higher level if you abstain entirely. Realise your responsibility in life, avoid the light and irresponsible word which is remembered and comes back years afterwards. When you come into your kingdom—i.e., when you graduate—do not abuse or misuse your authority. Your degree has been given you not to make you think you are superior but to make you always courteous and ready to help others. What is known as "side" is out of place here, whether it be "side" of intellect, of birth, or of money. Try to control not only words and deeds but your thoughts. When an unworthy thought comes into your head try to replace it at once by a good one. Do not worry about other people's thoughts, you will have enough to do to control your own. In conclusion I shall wish you a healthy mind in a healthy body, and those of you who know what perfect health is will understand that my wish for you is the *summum bonum* of every life.

A CASE OF GIGANTIC RENAL CALCULUS,

ILLUSTRATED WITH REMARKS ON CASES WHERE RENAL STONES FORM OBVIOUS TUMOURS.[1]

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THE subject of this communication may be well introduced by my briefly relating the details of a case which I believe is unique in the history of surgery.

An omnibus conductor, aged 39 years, was admitted into St. George's Hospital on Feb. 15th, 1904. He was a stout, muscular man, with no appearance of ill health, but was suffering from severe pain in the abdomen and becoming rapidly worse, with signs of collapse. He was under the care of Dr. H. D. Rolleston. The following history was obtained. In 1890 the patient had his first attack of hæmaturia and pain in the left loin. Several attacks occurred subsequently but did not at any time cause him to lie up. In November, 1903, he was admitted into St. George's Hospital under Dr. Rolleston for a further attack of hæmaturia of seven days' duration. There was then pain in the left loin, but the kidney could not be felt, the patient being somewhat stout; the urine was acid and contained blood and pus. The symptoms entirely passed away and it was decided to await more urgent symptoms before operating. The patient improved and was discharged after being in hospital for 14 days. Early in January last the patient had a severe bout of pain and hæmaturia which laid him up for three weeks. On Feb. 10th a further attack commenced, obliging him to discontinue work: there was no hæmaturia, but he had great pain and discomfort in the left renal region; a swelling was then noticed for the first time. The temperature was 101° F. and the pulse was 104. Filling the left flank and loin was a large, rounded, firm swelling, very tender, not moving with respiration. The urine was acid and contained no albumin or blood. There was no leucocytosis. The diagnosis was very dubious, the opinions rather inclining to a large malignant tumour with intrarenal hæmorrhage.

Operation was performed on Feb. 19th. An incision, five inches in length, was made through the left semilunar line and on dividing the abdominal wall an abscess containing a quantity of pus and two small stones was immediately opened. There was localised peritonitis and one of the stones had escaped anteriorly. The kidney was greatly enlarged and firmly adherent to the surrounding parts. The colon was flattened and noticeably adherent anteriorly. There was a ragged hole in the lower and anterior aspect of the sac through which pus, urine, and small stones had escaped. An enormous stone, which was subsequently found to weigh more than a pound, was now felt and removed with some difficulty. The kidney was then gradually separated and its pedicle was tied. After its removal there were found two small stones in its substance. The wound was thoroughly irrigated with saline fluid and sponged as dry as possible; a large drainage-tube was inserted through a counter-opening in the loin and the anterior incision was closed. The whole of this great stone lay in the "shell" of renal substance under the dome of the diaphragm and protected by the ribs. The inferior part of the tumour, which alone could be felt, was composed of dilated renal calyces containing pus and urinous fluid. The difficulties of the operation were very great. Pus and urinous fluid were pouring from the diseased mass over the intestines and wound. The dilated shell of renal substance was rotten, lacerable, and intimately adherent to the parts round, especially to the intestine, so that it was extracted with the greatest difficulty. The pedicle was indistinguishable. The parts where the renal vessels ought to have entered were clamped and on cutting away the tissues the vessels were secured. They were ligatured *en masse* with strong, stout silk. The operation, though performed with all possible speed, lasted one hour and the patient at its termination was collapsed but to no serious extent.

The after-treatment consisted in saline and nutrient enemata, a small quantity of laudanum being used with the rectal injections. The bowels were opened on the second day and fluid nourishment was then given by the mouth. The temperature and pulse became practically normal. The only trouble in the after-treatment was the anterior wound which, of course, was long exposed to a flow of septic pus. It inflamed and suppurated in several places, but by dint of great care on the part of the house surgeon and dressers this complication was successfully overcome. The patient is now back at work and in good health.

This great stone, when weighed fresh by the museum attendant and soaked in blood and fluid, with sand and detritus, was declared by him to weigh 19 ounces. When weighed dry with critical care on chemical scales some weeks after removal it weighed exactly one pound and half an ounce. Its measurements are as follows: long diameter, five and a half inches; circumference at the largest part, about ten inches (see illustration). A large facet is present where the stone lay against the vertebræ. The composition is probably oxalate and phosphatic, but I deferred cutting the calculus until it had been exhibited. A quantity of sand and small gravel-stones were lost in the operation. It will be seen that portions of the stone are broken away, so that the weight above stated is really a little below the mark. Obvious comments on this very striking case are the slightness of the symptoms, and it is significant that the man was able to do his work as an omnibus conductor until a short time before admission. His vehicle plied in the Gray's Inn-road which is not celebrated for its smoothness!

Every practical surgeon well knows how protean are the signs and symptoms of renal calculus. It has happened to all operating surgeons to meet with cases where pain and hæmaturia were present in a marked degree and to cut into the kidney with the confidence that a stone would be found, but they have been deceived. Again, some of the most agonising and severe symptoms are associated with small rough calculi not larger than an almond or a hazel nut, while the novice may be surprised on operating upon a case when the symptoms are but slight to be confronted with a stone of portentous dimensions, the size and presence of which were far from being previously realised. The curious nerve pains, the attacks of sickness, and all the other phenomena attending renal stone have been amplified and written about by authors and it would only be wearying for me to repeat them here. A word may perhaps be introduced, however, regarding the utility of the x rays as a means of diagnosis. I think there can be no doubt but that the efficacy of the Roentgen rays in the diagnosis of these cases depends a good deal on the skill and experience of those who apply the method. It has twice occurred to me to see the shadow of a stone depicted by one performer where another had failed, and there are doubtless minutiæ connected with the process which call for great technical skill and long experience. Given, however, the presence of typical symptoms are we certainly to conclude that no stone

[1] A paper read before the Medical Society of London on Oct. 10th 1904.

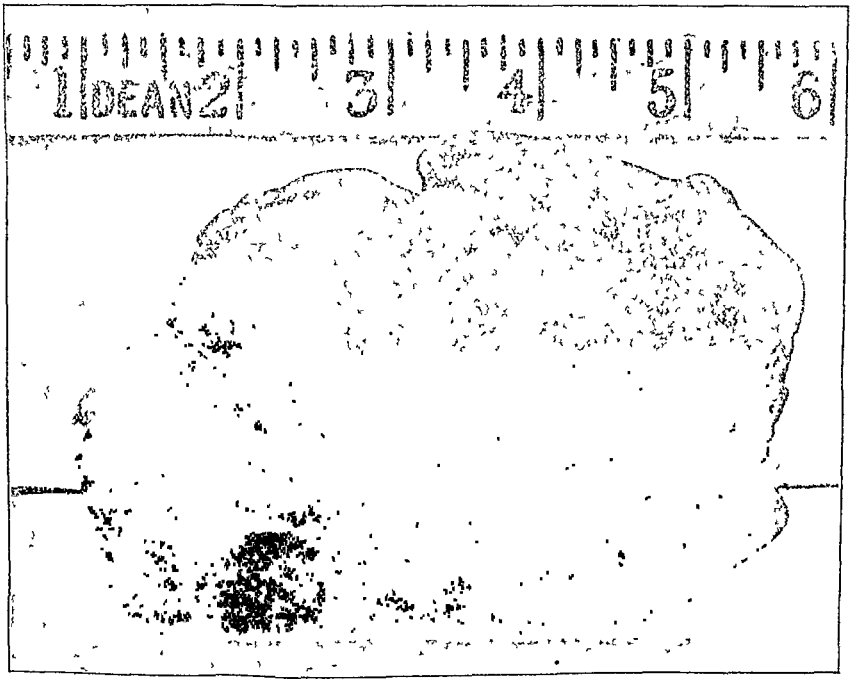
is present because no shade of it appears in the skiagram? I think the answer is in the negative The conclusion seems to be that the skiagram when positive is of great value, when negative, not absolutely to be relied upon

A case which will illustrate these remarks is as follows In November, 1903, I treated a woman of middle age whose symptoms were entirely vesical She had pus in the urine, intense irritability, and frequency of micturition; the urine was also alkaline. Four years before she had passed several small calculi. Careful examination of the bladder with sound and cystoscope revealed no stone. The renal regions were subjected to the x rays and the result was negative The right kidney was, however, moveable and certainly enlarged to palpation bimanually. It was explored through the loin and a large oxalate calculus was found and removed

The subject I wish to bring before the society this evening is one which I venture to think has not received the notice it ought. I do not believe it is generally known and appreciated that renal stones, when of great size or when very numerous, may form an abdominal tumour of notable size, the nature of which is very apt to be misunderstood My attention was first drawn to this point by a case which occurred at St George's Hospital many years ago An old woman was dying from carcinoma of the breast a recurrence of growth after a mammary operation She had agonising pain in the back and a large hard mass could be felt to the right and in front of the spine by palpation through her emaciated abdomen The natural diagnosis was made of recurrent cancer of the spine But when she died the supposed tumour was composed of a dilated kidney stuffed with a number of large oxalate stones Authors generally are silent on those very interesting, rare, but important cases Morris in his Hunterian lectures relates an instance which has a bearing on the subject The patient was a man A hard "bony" tumour filled the right side of the abdomen It had been considered to be hepatic cancer. On exploration the tumour was found to be renal and a calculous mass weighing ten ounces was removed The kidney bled so freely that it had to be removed, but the patient sank. This man had "gone on" for 16 years without important symptoms

I must also refer to the remarkable and enormous renal calculus in the museum of St Bartholomew's Hospital which must be seen to be appreciated. a composite stalactitic mass on a central stem or core which weighs no less than 36¾ ounces—over two pounds The second stone, weighing nine and three quarter ounces, from the opposite or left kidney, is also shown There were hundreds of smaller calculi and much sand and débris These extraordinary formations were removed from the body of a man, aged 38 years, who died in the hospital suddenly It is interesting to observe that an abdominal tumour was detected during life which, as in my case, reached from the costal margin to Poupart's ligament Yet Dr S J. Gee, who has carefully related this remarkable case, states that the urine was natural in quantity The kidneys are preserved and are seen to be extensively disorganised Reference is made to Eurale's writings and he states that Pohl removed a stone weighing five pounds from the body of a princess But I am not aware that the statement has been verified [2]

A striking case which occurred in my practice some years ago is as follows An emaciated, rather fragile woman was seen at the Hospital for Children and Women, Waterloo-road, in March, 1899 She was married but had no children, she had been ailing for six months and pus was found in the urine The tumour was found almost by accident It reached from under the ribs to the ilium below and beyond the middle line in front The colon was in front of it It was obviously very fixed and not painful It was very hard and irregular and felt exactly like a hard lobulated tumour



Showing size of stone.

growth. The urine had on several occasions contained blood. It was now clear and acid. At the operation the colon and some small intestine were found flattened in front of the tumour and adherent to it. Some enormous veins occupied the capsule. The tumour was hard with irregular bosses upon it. Towards the spine it seemed to blend into the tissues. I was on the point of believing it to be sarcomatous and not removeable. When I introduced an exploring syringe at several points pus was withdrawn and I plainly felt the needle grate against a large calculus. I determined, therefore, to proceed with removal though I knew the case was of a desperate nature. I incised the capsule and dissected away the colon. In doing this the gut was nearly opened in one place. I then stripped away the renal capsule with the fingers and gradually enucleated the growth. The difficulty was very great and there was profuse venous bleeding. At last separation was effected and now the peril of the proceeding was obvious—it was impossible to isolate the tumour towards the spine. An ill-defined mass of the size of the wrist was all that could be felt. I was much puzzled to know what to do. The aorta was not distinguishable from the mass and I could not make a neat and distinct pedicle behind it. I accordingly freely incised the kidney and let out a quantity of pus and stones into a receiver. This enabled the assistant to deliver it further and I encircled the renal substance close to the spine with a strong silk ligature and cut it away. I tightened the ligature with all my force on the collapsed tissue and the bleeding was quite arrested. I finally cut away the centre of the mass left beyond the ligature, saturated it with carbolic acid, and sewed the masses of capsule together like the stump of a hysterectomy. The patient was, of course, seriously collapsed. The operation was completed in 65 minutes from the first time of taking the anæsthetic. It was performed with all possible speed. The woman was desperately ill after the operation and hovered between life and death for three days. She was kept alive by free stimulation and by judicious feeding and owed her recovery largely to the care bestowed upon her by the resident officer Dr. Méchod. 14 days after operation a fluctuating swelling could be found in the operation area. The temperature was a little raised. I waited events and this collection, probably either blood or serum, became rapidly absorbed. This was one of the most desperate abdominal cases I have ever seen, and I feel sure that speed in operating was one of the factors of success. The patient made an excellent recovery and was quite well and strong two years after the operation, when I last saw her.

In remarking on the operation itself I may observe that the colon was so injured at one spot, its peritoneal coat being torn, that I invaginated an area of the gut with Lembert's sutures. I was also very apprehensive that I had lacerated the diaphragm above. The renal capsule was intimately adherent here and in tearing it away I believe my fingers penetrated the thorax. I accordingly tamponaded this region with gauze and brought out the end of the gauze anteriorly. The strip was removed in 24 hours. These complications, as well as the extreme difficulty of making a secure pedicle already described, speak eloquently of the dangers and extreme difficulties which are encountered in [illegible] nephrosis which is intimately adherent [illegible]. The kidney in this case was completely [illegible] a huge lobulated sac, full of pus and calculi, and but little secreting substance remaining. The calculi were eight in number and of various sizes and shapes as seen in the specimens. There was also a quantity of "sand" and detritus. The composition of them was mainly oxalate of lime and mixed phosphates as a coating.

Before concluding a consideration may well be raised as to the best method of dealing with cases of large or multiple calculi when the kidney is much disorganised. The results of nephrolithotomy by the loin are not always encouraging in these cases. I have seen septic sinuses discharging pus and urine persistently remain in the loin and the shell of kidney has had subsequently to be removed in very disadvantageous circumstances. I am rather inclined to the belief that removal of the disorganised kidney and calculi by an anterior incision is the best method by which to deal with these cases. My personal experience has amply proved to me that these operations may be exceedingly difficult. The risk of lacerating intestines is very great and the isolation and securing of a satisfactory pedicle may be a matter of the utmost difficulty. So far as I have been able to ascertain the present exhibited calculus is the largest which has ever been removed successfully from the kidney of a living person and it affords a striking illustration of what desperate abdominal conditions may now be dealt with by the aid of surgery.

I am indebted to Mr. Harold S. Barwell for the following list of renal calculi of unusual size;—

Transactions of the Clinical Society, vol. xxvi., p. 24, 1893. Donald Day's case of nephrolithotomy. Female, aged 32 years. Weight (dry) 1331 grains (two ounces four drachms); recovery. There is no record of a stone of this size previously removed successfully. Jacobson's Manual: 652 grains and 473 grains (both fatal). Shepherd (of Montreal): four ounces seven drachms (fatal). Bennett May (in the Transactions of the Clinical Society): 473 grains (successful). Footner (Brit. Med. Jour., Jan. 9th, 1892); 822 grains (successful); composition chiefly phosphate of lime and phosphate of magnesium. Royal College of Surgeons Museum: Calculi, Series V., F. 11: Phosphate of lime calculus five inches long; weight, five and a half ounces. Removed by operation from a woman, aged 46 years. Referred to by Langley Browne in Brit. Med. Jour., vol. i., 1888, p. 821. Calculi, Series V., F. 12: Phosphatic calculus weighing five and a quarter ounces, removed at the necropsy from a man, aged 52 years. Hale White: Stone weighing 1560 grains from a dissecting-room subject, Transactions of the Pathological Society of London, vol. xxxvi., p. 276.

Cavendish-place, W.

A CASE OF FRACTURE-DISLOCATION OF THE CERVICAL VERTEBRÆ.

BY ERNEST RINGROSE, L.R.C.P. LOND., M.R.C.S. ENG.,
HONORARY SURGEON TO THE NEWARK HOSPITAL.

THE following case of fracture-dislocation of the neck which I venture to record is, I think, of considerable interest in showing that extensive and persistent injury of the lower cervical vertebræ may occur and produce only few and transient symptoms, the disproportion between the accident and the mischief produced thereby being the converse of what is usually found in these cases—viz., slight injury with serious and permanent symptoms. Moreover, this case shows that it was possible and excusable not to diagnose such a usually serious lesion as fracture-dislocation of the cervical vertebræ in the pre-Roentgen-ray days.

The patient, a boy, aged 14 years, was admitted into the Newark Hospital on the afternoon of June 28th, 1894. He stated that whilst diving into the river at the bathing place he collided with a man who was swimming by at the time. He was partially stunned but managed to reach the bank and was then taken out of the water by some friends and carried to the hospital. At the time, he never lost consciousness but felt "queer in his head."

On admission the patient complained of headache and pain at the lower part of his neck. He had not vomited. There was no loss of power or of sensation anywhere. The neck was rigid and slightly tender. There was no bruising and no deformity was to be seen. The scalp was normal. He was put to bed and his head and shoulders were carefully fixed with sandbags and a saline aperient was given. He had a fairly good night and in the morning said that he felt quite himself again. He was, however, unable to move his head except to a very limited extent, the side-to-side movement and extension being much more restricted than flexion. There were still considerable rigidity of the neck muscles and some tenderness. He refused to stay in the hospital for more than three days and returned home on July 1st, no further symptoms of any kind having developed. The diagnosis made at the time was slight cerebral concussion and strain of the muscles and tissues of the neck.

I saw the lad several times afterwards at his home and found that he was in the habit of holding his head with his right hand under the right side of the lower jaw when walking about, and he now tells me that he continued to hold his head steady in that manner for a period of six months. I lost sight of him for a long period but on seeing him again recently I found that he had joined the militia, having been passed as sound by the militia surgeon, and was up here for the annual training. He appeared to be a well set-up young man but I noticed that he carried his head rather stiffly, and being rather curious to know if any mischief could be detected by the aid of the Roentgen rays I persuaded him to be skiagraphed. An abnormal condition of the cervical vertebræ was detected by the screen and a

photograph was taken, for which I am indebted to Dr. A. Hamilton Lowe, the house surgeon.

A forward displacement has taken place in the lower cervical region, the centre of the body of the fifth cervical vertebra resting on the anterior superior edge of the body of the sixth. The bodies of the fifth and sixth vertebræ appear

Skiagram showing fracture-dislocation of cervical vertebræ.

small and wedge-shaped, the sixth more so than the fifth, the apex of the wedge being anterior. The body of the fourth vertebra is almost directly anterior to the fifth. The sixth and seventh cervical and first dorsal vertebræ are pushed backwards, while the cervical curve is greatly increased from the fifth vertebra upwards, the intervertebral spaces being considerably opened, a line drawn through the centre of the body of the fourth and one drawn through the centre of the body of the seventh forming an angle of about 100°. The altered shape of the bodies of the fifth and sixth vertebræ I conclude may be due partly to some crushing at the time of the accident and partly to the altered position and constant pressure acting for a period of ten years.

Newark.

PULSATING GANGRENE OF THE LUNG.

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PULSATING gangrene of the lung is a morbid condition of which I have not been able to find any description in the medical literature to which I have access and I have therefore determined to publish the notes of a case which occurred in my wards in the Glasgow Royal Infirmary in 1898. I also think the case worthy of record because it seems to me to assist towards the explanation of the pulsation in that somewhat rare but very well known affection, pulsating empyema. Under the name of "pulsating empyema of necessity" in 1844 Robert L. MacDonnell of Dublin was the first in this country to call attention to this interesting and rare condition.[1] He reported three cases, two of which were verified by post-mortem examination. In all of them pulsating tumours appeared on the left side of the chest, one in the cardiac region and the other two at the lower part of the left side. Dr. Chambers thus explains Dr. MacDonnell's use of the term.[2] "The latter was called by Dr. MacDonnell 'pulsating empyema of necessity,' as the term 'empyema of necessity' was always applied by the older writers to cases where the [illegible] In a subse[illegible] the term. [illegible] the thesis of Dr. Jules Comby in 1881, "De l'Empyème Pulsatile, [illegible] report [illegible] and he [illegible] gnosis [illegible] the French physician, from "pneumonie pulsatile," "cancer pulsatile du poumon," and "anévrysme de l'aorte." In referring to pulsating cancer of the lung as a disease likely to be mistaken for empyema pulsans Dr. Comby is following Dr. MacDonnell; it is noteworthy, however, that Dr. MacDonnell apparently had never seen a case of the kind and his remarks on the subject are purely theoretical.

The contribution by Dr. Samuel West[4] in 1897 is important. "Empyema may pulsate," he says, "but distinct pulsation i[illegible] . The fact remains th[illegible] Comby in 1883 gave [illegible]; "Wilson in 1893 brings up the number of published cases to 68." The pulsation is of two kinds: (1) a general shock or intra-pleural pulsation; and (2) expansile pulsation or extra-pleural pulsation. Such is Dr. West's classification of the affection. He continues his paper by entering upon a discussion of the diagnosis of the two varieties and concludes it with observations upon the explanation of the phenomenon, pointing out that "there appear to be three different kinds of pulsation." I agree entirely with him in his remarks upon the "pulsating pneumonia" of Graves. "As to the existence even of pneumonia pulsans I am very sceptical," writes Dr. West, and I am quite at one with him. Graves's account of pulsating pneumonia—a common occurrence according to him—is to be found in his clinical lectures,[5] but few, I think, will now agree with the explanation he gives of the cause of the pulsation. I have already said that Dr. West's paper is an important contribution on this interesting clinical condition and it is therefore perhaps necessary to point out one or two bibliographical and typographical errors. Dr Robert L. MacDonnell did not spell his name "Macdonald" and he did not publish his paper in "1854."[6] The title of Dr. Comby's paper in the *Archives Générales de Médecine*, 1883, vol. ii., was not "Thesis d'Empyème Pulsatile"[7] but "Les Pleurésies Pulsatiles (Empyème Pulsatile)," which was an expansion of his thesis entitled "De l'Empyème Pulsatile," published Dec. 30th, 1881. Such errors may seem trifling but they are apt to grow and I find that some of them have already reappeared in Dr West's valuable treatise on "Diseases of the Lungs."

An important article on pulsatile empyema has also been written by Dieulafoy[8] in which he expresses his preference for the term "empyème pulsatile" rather than that of "pleurésie pulsatile" as adopted by Dr. Comby in his second monograph. He thinks the effusion in such cases is practically always purulent and that pulsating empyema always occurs on the left side. He supports his views by two cases of his own. I may finish these short historical notes by reference to the interesting paper of Dr. E. M. Light,[9] in [illegible] en in careful detail. [illegible] l in children, and in [illegible] the cardiac impulse [illegible] n it may be worthy [illegible] the pulsation as "a strong diastolic pulsation."[10]

The case of pulsating gangrene of the lung now to be described is related to pulsating empyema merely by the clinical fact of pulsation. In the foregoing literary note

[1] Contributions to the Diagnosis of Empyema, with cases, Dublin Journal of Medical Science, 1844, vol. xxv., p. 1.

[2] Pulsating Empyema after Acute Pleuritis; a Swelling above the Left Nipple which Burst Spontaneously; Recovery, THE LANCET, May 31st, 1862, p. 573.

[3] [illegible] Medical [illegible] Wales [illegible] Royal [illegible] Loc. cit. p. 4 et seq. footnote.

[4] Manuel de Pathologie Interne, 1901, thirteenth edition tome i., p. 531.

[5] Notes on Three Cases of Pulsating Empyema, THE LANCET, Sept. 26th, 1891, p. 704.

[10] Loc. cit., p. 4 et seq.

references are found to pulsating pneumonia and to pulsatile cancer of the lung; both of these conditions are, perhaps, more intimately related to the morbid state with which I am now dealing than pulsating empyema, but of neither of them can I find any detailed pathological or clinical account. In the present case the gangrene was verified post mortem and the intimate relationship of the large gangrenous cavity to the pericardium sufficiently explained the pulsation of the chest-wall at the left base posteriorly which was discovered during life.

Clinical report by the house physician, Mr. George Coats, M.B.—A woman, aged 37 years, was admitted to Ward 8 of the Glasgow Royal Infirmary on Nov. 29th, 1898, and died Dec. 16th, 1898. She complained of pain in the left side, cough and spit of about five days' duration. Two weeks previous to the onset of the above symptoms patient had an ordinary cold. On Nov. 24th she suddenly became worse and then complained of the severe pain in the left side [illegible] by a long breath. For about four days previous [illegible] ain she had complained of rigors and severe pain [illegible] ck. On Nov. 24th she had a more severe rigor and [illegible] was much aggravated and began to be accompanied by a somewhat profuse spit, at first white, later somewhat brown and dark. She was seen first by her doctor on Nov. 24th and was then put on a diet of milk and soda water. With the exception of a little gruel and beef-tea she has continued the limited diet. She was not aware of any delirium but sleep at night had been only in snatches. The pain in the side was very troublesome when she coughed. The bowels were constipated and during the last three days there had been no motion.

Examined Nov. 29th, 1898. The patient lies easily in bed. The face is somewhat flushed and on the whole rather suggestive of acute pulmonary disease. The pupils are medium and active. The tongue is flabby and indented, clean at the edges but coated elsewhere with a creamy white fur. The respirations are shallow and number 32–34 per minute. The pulse is small and of fair tension, registering 100 per minute. The expectoration is not very characteristic of pneumonia, consisting of isolated rather nummular pellets of a slightly brownish tinge floating in frothy mucus. The cough is loose but restrained as if from desire to prevent pain. The decubitus is either dorsal or on the right side. The patient states that it is painful to lie on the left side.

Chest.—On inspection of the anterior aspect a slight degree of fulness is visible over the left front, from the level of the second space downwards, so that the intercostal spaces, which are well seen on the [illegible] visible on the left. Both to inspection and palpa- [illegible] in the left front and axillary regions is [illegible] on in front is everywhere resonant and [illegible] ory murmur is anywhere detected.

Posteriorly there is distinct comparative dulness over the whole left base from the level of the mid-scapular region downwards, but auscultatory phenomena are quite indefinite, the respiratory murmur being on the whole normal over the dull area and unaccompanied by râle.

The heart.—The apex beat is visible and palpable as a somewhat diffuse impulse in the fourth interspace, three inches to the left of the middle line. The cardiac area is not enlarged, the upper border corresponds to the fourth left interspace, the right border is in the middle line, and the left border two and a half inches to the left of the middle line. The first sound at the apex and indeed all over the cardiac area is sharp, abrupt, and somewhat slapping in character. At the base the second sound is well articulated, though not unduly loud. In the apex region a short superficial systolic murmur is occasionally heard and is carried towards the axilla and the pulmonic area but is not audible in the aortic area. There is no history of rheumatism, though she has occasionally suffered from rheumatic pains in the right shoulder.

Urine.—Specific gravity 1022, slightly acid, deep amber colour, no albumin, no sugar, a slight diminution of chlorides.

Note by Dr. Lindsay Steven.—The clinical history indicates on the whole an acute pneumonia, supervening upon a common cold. The physical signs are, however, quite indefinite with the exception of the dulness at the left base and the slightly rusty spit. The cardiac murmur is slightly variable in intensity and possesses a character which is rather suggestive of extracardial origin. The obliteration of the intercostal spaces on the left side may be due to voluntary fixation to avoid pain, though the possibility of pleural involvement must be kept in mind.

Dec. 1st, 1898 (Dr. Steven).—The general condition of the patient is perhaps a little improved, but the temperature shows a distinct tendency to a highly irregularly remittent type, in the 24 hours ranging between 99·2° and 102·8° F. 3. The pulse this morning numbers 82, the respirations 32. The physical signs have undergone no marked change except that at and about the lower angle of the left scapula pretty abundant coarse crackling râles both with inspiration and expiration are audible. It is thought possible that the condition of the first sound at the apex may indicate a mitral stenosis. The chief change in the case is the supervention of a highly offensive and somewhat gangrenous odour of the sputum, which likewise has changed from its brown colour to a dirty grey. The pain in the left side is not now complained of.

Dec. 2nd (Dr. Steven).—A notable feature in the case this morning is a marked diminution, [illegible] tory murmur in the left infra-cla[illegible] with a somewhat exaggerated respiratory [illegible] ity, over the right infra-clavicular region. The apex beat is still in the same situation and the first sound presents similar characters. Occasionally at the level of the third left cartilage and over the apex a faint pleuro-pericardial friction is heard. The same comparative enfeeblement of respiratory murmur prevails over the whole left back and dulness is more absolute than before below the level of the angle of the left scapula. The râles are very scanty, none being audible in the dull area, although yesterday moist crackling râles with inspiration and expiration were heard in the axillary line in the dull area. The sputum is very distinctly fœtid, although hardly gangrenous in odour, and at the time of this note a minute speck of blood is noted for the first time.

Dec. 6th (Dr. Steven).—The cough is now ver[illegible] severe and frequent, apt to be paroxysmal. The fœtor of the sputum is still pronounced. The general appearance is much deteriorated and during the last three or four nights profuse perspiration, necessitating change of dress, has occurred. The temperature is still irregularly remittent; maxima about 102°, minima about 99·4°. The pulse ranges between 80 and 90, the respirations between 20 and 30. There is still very marked dulness over the whole left base posteriorly, with great enfeeblement of the respiratory murmur, which is almost inaudible, though judged to be tubular in quality. Occasionally a crackle can be made out in the left infra-axillary region.

Dec. 13th (Dr. Steven).—Since the date of the last note a low type of fever of a somewhat continued character has been recorded, the base line of a four-hourly chart being situated at 100°, the maximum and minimum records during five consecutive days being 101° and 99° respectively and these only on two occasions. The pulse ranged between 85 and 100; the respirations about 30. During the last four days from two and a half to four ounces of expectoration have been expelled daily. Yesterday evening about 7 P.M. she became rather sick after taking creasote. The sickness brought on a paroxysm of coughing which ended in the expectoration of about one ounce of bright-red frothy blood [illegible] found to be partially coagulated. The pulse [illegible] force and rhythm, and numbers about 90 Th[illegible] 36 and not obviously laboured. The t[illegible] e fur. The complexion [illegible] The chest anteriorly [illegible] infra-clavicular region, [illegible] n and auscultation over the lungs in front yield normal results. The respiratory murmur presents a healthy quality and is equal on both sides. Posteriorly, there is slight flattening and perhaps slightly defective movement at the left base. The vocal fremitus over the dull area is distinctly diminished. The dulness of the left base begins at the sixth dorsal spine, from which its upper margin slopes gently downwards and outwards, cutting the sixth rib in the mid-axillary line. Auscultation reveals a deficient respiratory murmur not obviously tubular over the whole dull area and scanty irregular râles. The fœtor of the expectoration is also improved. The occurrence of the hæmoptysis in succession to the events noted in the foregoing report renders it pretty certain that a limited necrosis in the base of the left lung has followed the pneumonia.

Dec. 15th (Dr. Steven).—On examining the left base this morning it is noticed that the cardiac sounds are heard with great distinctness in the dull area and further that a very distinct cardiac impulse is felt in the same place.

Dec. 16th.—The patient died this evening about 7.30. The grave symptoms may be dated from Dec. 12th, when she first had hæmoptysis as noted in the entry of Dec. 13th. After the hæmoptysis the temperature rose to 103·4°, falling the next day at noon to 98°, only to rise again in the evening to 104·6°. During Dec. 13th she had hæmoptysis to the amount of 16 ounces. In the [illegible] 4th she had a rather severe rigor, followed by [illegible] °, and in the evening the temperature was [illegible] 100° at noon. Since then the temperature has pursued a highly irregular remittent course but with on the whole a downward tendency. Hæmoptysis on Dec. 12th was five ounces; Dec. 15th, ten ounces; Dec. 16th, before her death, four ounces; latterly, however, there was only altered black blood, no bright red hæmorrhage. Respirations ranged between 30 and 40 and the pulse between 100 and 140. The fœtor of the expectoration was very marked to the end and the cough was throughout troublesome. About noon of Dec. 16th a marked change for the worse took place in the patient's condition, the respirations becoming very much embarrassed, and the pulse beginning to fail. Free stimulation was resorted to, but in spite of this she sank and died. During the day there was considerable diarrhœa, the motions being very dark and tarry.

Dec. 18th, 1898. Post-mortem examination.—Well-nourished body. Rigor mortis moderately developed. Pupils dilated and slightly unequal, the left being rather the smaller. On exposing the peritoneal cavity the stomach is found to be considerably dilated and bent upon itself so that the greater curvature at its lower point is only four inches above the level of the symphysis. The pericardium contains about 12 ounces of clear serous fluid in which one or two loose gelatinous clots are suspended. The surface of both layers of the pericardium is smooth, there [illegible] ndation. The heart is small and rather pale. [illegible] The mitral orifice has a circumference of 91 [illegible] spid 145 millimetres. The pulmonary and aortic orifices are quite competent and all the valvular curtains are quite normal in structure. The structure of the aortic arch is normal. The right lung is quite non-adherent and is voluminous. It is not intensely pigmented and its anterior margins are suggestive of very slight emphysema. The whole substance of the organ is very highly œdematous but otherwise the parenchyma shows nothing unusual. The bronchial mucous membrane is intensely hyperæmic in the larger and medium bronchi. On dealing with the left lung it is found to be firmly adherent posteriorly from apex to base. Projecting through the left aspect of the pericardium, to which the lung is firmly adherent, is seen a fluctuating swelling which is bounded below by the diaphragm and externally by the lower lobe of the adherent left lung. In order to permit of a more thorough investigation of this swelling the abdominal organs are removed before the lung and the swelling are removed. The liver is pale but healthy in appearance and weighs 52 ounces; the gall-bladder contains normal bile. The dilated stomach is opened along its lesser curvature. It contains a large quantity of brown fluid. The internal surface near the pylorus is covered with shreddy mucus, but the mucous membrane shows no abrasion. The fibres of the pyloric ring are well developed. Appearances are those of atonic distension with catarrh of mucous membrane and diapedetic hæmorrhage. The spleen is large and soft and its vessel walls contain yellow nodules like caseating miliary tubercles. The kidneys are slightly enlarged; the left weighs seven ounces as also the right. Their capsules slightly adherent with small cysts. With difficulty the left lung is removed and it is found that the pericardial swelling does not disappear in the process. The left lower lobe on dissection is found to be the seat of a large gangrenous cavity filled with necrosed lung tissue and blood, the cavity occupying almost the whole substance of the lobe. The pericardial swelling had been caused by the cavity bulging into the pericardium and it entirely disappeared when the lung was cut into. There was no lung tissue between the left wall of the pericardium and the pulmonary cavity, so that the pericardial wall formed the inner surface of the gangrenous excavation.

in the adherent left lung This anatomical condition is of interest in connexion with the distinct pulsation felt during life over the lower lobe behind and the clear transmission of the heart sounds in the same situation

Such is the case as recorded in the ward journal The post mortem examination clearly proved that the pulsation was caused by the intimate relationship of the gangrenous lower lobe of the left lung to the left surface of the pericardial sac It is also of interest that there was a distinct tumour like projection inwards of the pericardial wall which would receive the systolic shock of the heart and this was transmitted to the chest wall through the semi fluid contents of the gangrenous cavity There was no localised bulging of the chest wall as in most of the cases of pulsating empyema—the bulging was internal into the pericardium The pulsation was distinctly felt in the intercostal spaces of the left axilla and at the base behind and was of the same character as that felt over the apex beat of the heart It was a distinct systolic pulse Making use of West's classification it corresponded to his 'intra pleural pulsation,' but it was, of course, intrapulmonic This being so it might be suggested that the terms "intra thoracic" and "extra thoracic" might better describe the pulsation in the first instance until at least it is determined whether the disease is pleural or pulmonary in origin

It is worthy of note also that the heart was neither hypertrophied nor fixed and that the left lung was everywhere so firmly adherent that it was removed with difficulty from the thoracic cavity Applying the anatomical conditions found in the present case to the explanation of the cause of pulsating empyema they would seem to indicate that in order for an empyema to pulsate the pus filled cavity must directly abut upon the pericardium and the adjoining lung must be firmly bound to the chest wall by adhesions It is unnecessary apparently that the heart should either be hypertrophied, displaced, or fixed

I am indebted to my pupil, Dr D Annabelle McGregor, for carefully extracting the notes of the case from the ward journal

Glasgow.

A CASE OF BLOOD POISONING FROM TONSILLITIS.

COMPARATIVE RESULTS OBTAINED FROM TWO VARIETIES OF ANTISTREPTOCOCCIC SERUM AND FROM MERCHLORIDE OF IRON

BY SIR ISAMBARD OWEN, M D CANTAB, F R C P LOND, PHYSICIAN TO ST GEORGE'S HOSPITAL.

THE patient, a man, aged 22 years, was admitted to St George's Hospital on Jan 1st, 1904, suffering from a severe sore throat The fauces were generally red and swollen, both tonsils were swollen and a patch of membrane was observed on the left tonsil The anterior chain of cervical glands was swollen on both sides The affection of the throat was said to have commenced on Dec 24th, 1903 A swab was taken for bacteriological examination but neither diphtheritic organisms nor streptococci could be cultivated from it

The patient was seen by me for the first time on the afternoon of Jan 2nd The temperature had risen to 103° F on the previous night and had remained between 101° and 102° during the day No membrane was then visible on the tonsils but the left tonsil exhibited the appearances of suppuration. The glands in the neck were still swollen The patient was thin and pale and the eyes were surrounded by rings of dark colour On examining the chest a few scattered rhonchi of high pitch were heard at the right apex The second sound of the heart was reduplicated at the apex but nothing else abnormal was found by physical examination I ordered the left tonsil to be lanced and a wash of listerine to be used The condition of the throat thenceforward improved, the swelling and redness of the tonsils lessening and the swelling of the cervical glands diminishing The temperature, however, continued to rise The night temperature notwithstanding repeated sponging reached 104 7° on the night of the 4th and about 103° on the succeeding nights The patient grew weak, tremulous, and deaf, and began to wander in his mind The rhonchi in the chest increased, the abdomen became distended and tympanitic, and the tongue became dry On the 5th, suspecting enteric fever I ordered a Widal's test to be made, but no agglutination took place On the 6th the rhonchi disappeared Some loose motions had been passed The patient complained of pain in the right knee and shoulder When examined by me in the afternoon the whole of the right arm was very tender to touch The *left* knee had swollen and there was evidence of fluid effusion on the inner side of the joint and beneath the quadriceps extensor The superficial veins over the joint were dilated The patient was pale and he sweated profusely I ordered a bacteriological examination of the blood for the presence of streptococci and asked my surgical colleague Mr F Jaffrey to see the patient with me He advised no immediate operative measures Lead and opium lotion was applied to the affected joints and the left knee was put upon a splint By the 7th both the delirium and the sweating had increased The swelling of the knee was rather less but the tongue was still dry and raw

blood for Widal's reaction, made on the 8th, again proved negative I now (Jan 7th) commenced treatment by injection with antistreptococcic serum, employing at the outset the serum of the Lister Institute, and at the same time ordering a supply of Roux's serum to be obtained from Paris The injections were made subcutaneously in the flank Four injections of 20 cubic centimetres of the Lister Institute serum were made—one on the 7th one on the 8th, and two on the 9th but without any apparent result, the temperature continuing to reach or pass 103° every night the pain in the right shoulder increasing, the tongue remaining dry and red, and the condition of the left knee persisting unchanged On the 8th the apex beat of the heart was observed to be displaced into the nipple line and to have become diffused The second pulmonary sound was accentuated On the 10th I ordered the serum treatment to be discontinued, and, pending the arrival of the Roux's serum, prescribed a scruple of salicin to be taken every six hours On the 12th I received a consignment of Roux's serum The condition of the patient had then changed but little The shoulder had become more painful and there was obvious swelling of the joint Tubular breathing was heard over the left lung about the angle of the scapula The apex beat of the heart had extended outside the nipple line and a "slapping" second sound was heard in the pulmonary area Microscopic examination of the blood revealed nothing abnormal Treatment by Roux's serum was carried on from the 12th to the 16th eight subcutaneous injections of 20 cubic centimetres each being given in all—viz one on the 12th, two each on the 13th, 14th, and 15th, and one on the 16th The temperature sank steadily from the 13th to the 17th, the delirium disappeared, the shoulder became less painful, the tongue grew moist and less red, and the patient recovered his appetite being able to take custard and jelly on the 15th and fish diet from the 16th The pulse and respiration rates however remained unchanged On the 16th two boils three quarters of an inch in diameter, appeared on the back of the left shoulder over the scapula and one of similar size on the left buttock The serum treatment was thereupon omitted until the 18th On the 18th no streptococci could be found in the blood of which 15 cubic centimetres were again removed by Dr Spitta from the median basilic vein These organisms however were present in the urine Treatment by Roux's serum was now recommenced one injection of 20 cubic centimetres being given on the 18th and 19th three on the 20th, and one each on the 21st, 22nd, and 23rd The temperature rose to 100° on the evening of the 19th but was normal from the 20th to the 23rd The boils during this time partly healed that on the buttock being quite healed by the 25th and the knee recovered but pain persisted in the right arm the grasp of the hand being very feeble On the 24th the night temperature again rose slightly above normal I recommenced the injections on the 26th, one being made each day from the 26th to Feb 1st two on Feb 2nd and one on the 3rd During this period the pain in the right shoulder and arm continued to lessen and muscular power returned The appetite slowly improved the mental faculties were completely recovered and the boils healed But beyond a certain point the improvement did not go The temperature continued slightly raised and the patient remained weak and 'shaky' By the 2nd the right shoulder was free from pain but on the previous day pain and slight tenderness had appeared in the left thumb joint, and on the 2nd the left

the fourth month, five during the fifth month, and one during the seventh month. She could only attribute one abortion to physical causes—viz., one at the fourth month when from a fright she fell down and the abortion followed on the same evening. During the last pregnancy she had taken under the advice of her medical man aletris cordial but she miscarried at the seventh month. She could attribute the miscarriage to no cause. As it was the sincere wish of herself and her husband to have a living child she had always taken the greatest care of herself during pregnancy. On May 20th I ordered the patient to take two and a half grains of chlorate of potassium three times a day, which she took regularly up to Sept. 4th. On Sept. 6th she was delivered of a full-time living female child. Her labour was easy and the puerperium was unattended by complications. The child, though small, is perfectly healthy. The mother is a perfectly healthy woman suffering from no misplacement of the uterus or other cause likely to produce abortion.

Treherbert.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

President's Address.—Case of Gigantic Renal Calculus.

THE annual general meeting of this society was held on Oct. 10th, Dr. F. DE HAVILLAND HALL, the President, being in the chair. The treasurer's report and balance sheet, as passed by the auditors for the year ending Sept. 30th, were presented and adopted. The retiring President and the retiring honorary secretary, to whom the usual votes of thanks were accorded, then vacated their respective offices and Dr. de Havilland Hall inducted Mr. John Langton, the incoming President, into office.

The first ordinary meeting of the society was afterwards held, when Mr. LANGTON delivered his presidential address.

The PRESIDENT commenced his address by giving expression to his deep appreciation of the honour which the society had conferred upon him and remarked upon the dis-cussions which had taken place at the society and which en added greatly to the scientific value of the communica-s made at the meetings. He referred to the losses which society had incurred by death during the past year, ially mentioning the names of Dr. T. Gilbart-Smith and Sir W. Mitchell Banks. He then directed attention to various problems in pathology. Since the discovery of tubercle bacillus great progress had been made and Great Britain now occupied the proud position of having the lowest death-rate from tuberculosis, Russia having the highest. Referring to the progress of surgery, he emphasised the value of aseptic as compared with antiseptic methods. The pathology of cancer was then referred to and the importance of the discovery of the conjugation of young cancer cells by Dr. E. F. Bashford was mentioned. The radical cure of hernia, an operation which dated from the time of Celsus, was an important practical matter. Statistics from hospital practice on the ultimate effects of these operations were fallacious. It was necessary to trace cases for two, three, or four years before the real results could be measured. He had operated on 2319 cases, only 19 of which had been fatal, or less than 1 per cent. The degree of perfection of the results depended very much on the details of the operation. Out of 246 cases operated on in private he had ascertained the results in 214. Three cases had been fatal—two from venous embolism and one from acute sepsis. Only 26 of these cases had relapsed. The chief question relating to the radical cure of hernia before the profession at the present time was the best age at which to perform the operation. Some advocated it as early as possible. The proper time varied with circumstances but the operation was best done in early life. Herniæ in children were apt to disappear from time to time and the causes of this were considered. Continuous pressure never resulted in cure. Strangulation in children was always acute but with rest and warm baths the hernia could generally be reduced. The operation for the radical cure of hernia had taken nearly 2000 years to perfect but the problem had now been solved. In conclusion the President referred to the visit of the French physicians and surgeons to England, extending to them a cordial welcome in the name of the society and inviting those present to take part in the discussion.

Mr. A. MARMADUKE SHEILD read a paper entitled "A Case of Gigantic Renal Calculus, illustrated with Remarks on Cases where Renal Stones form Obvious Tumours," which is reported *in extenso* at p. 1074 of our present issue.—Mr. A. W. MAYO ROBSON congratulated Mr. Sheild on the success of his operation. It was clear that large calculi such as these must give rise to abdominal tumour but its renal origin could be detected by distending the colon with air. It could be done simply by a Higginson's syringe. This method, in his experience, had only failed on one occasion, in a case of suprarenal tumour. The x rays had considerable limitations: they would not show up uric acid calculi unless very large. Phosphatic and oxalic calculi were less transparent.—The PRESIDENT concurred in the untrustworthiness of the x rays. Affirmatively they were of value but not negatively. It was a point of some practical importance that the larger the stone and therefore the less its mobility the less acute and the less marked were the symptoms.—Mr. F. SWINFORD EDWARDS had met with calculi of from two ounces to two and a half ounces but never calculi of such a size as that exhibited. He concurred in the remarks of the previous speakers relative to the x rays and the advisability of removing the whole kidney in such cases at the time of the operation.—Professor AMBROSE MONPROFIT (Angers), who spoke in French, referred to an interesting case under his care of a young woman in whom was found at the operation a large ramifying calculus. The kidney was left behind but a fistula resulted which necessitated a second operation for the removal of the renal substance.

SOCIETY FOR THE STUDY OF INEBRIETY.—A quarterly meeting of this society was held on Oct. 11th, Dr. Harry Campbell, the President, being in the chair.—Dr. Charles F. Harford delivered an address entitled "The Drinking Habits of Uncivilised and Semi-civilised Races" and said that the protection of the weaker races of the world from demoralisation by the liquor traffic had for many years past occupied the attention of a special committee, the Native Races and the Liquor Traffic United Committee. In the course of these investigations some valuable facts had been recorded concerning the drinking habits of these races. These habits differed in each country. Perhaps the most convenient method of considering this subject was to classify the different kinds of drinks commonly used, noting where possible the way in which they were used and the effects which they produced. They were as follows:—1. Non-alcoholic beverages.—Water, milk, palm wine, and cocoanut milk when fresh, tea and coffee, and drinks made with various kinds of meal and water. 2. Native fermented drinks.—Various forms of corn beer of varying alcoholic strength, palm wine, cocoanut milk, and the like which had been allowed to ferment. 3. Distilled liquors.—Native spirits (especially such as were prepared in India), Cape brandy, and potato spirit, prepared especially in Germany for consumption in West Africa. These classes of liquor might be taken as samples of the drinks used by the native races, especially of India and Africa; the wines, beers, and the better forms of spirits manufactured in England and other European countries were almost left out of account as they were in the main too costly for wide use. 1. Non-alcoholic beverages.—Chiefly used by the races concerned with their meals. 2. Native fermented drinks.—Palm wine and similar products did not usually contain a large percentage of alcohol but when large quantities were taken intoxication might be produced. Sir William MacGregor estimated the strongest form of palm wine to contain less than 3 per cent. of alcohol. There were many varieties of corn beer. Mr. Joseph Orpen of Rhodesia had given some valuable information about different kinds of what were known as Kafir beer; one form, "leting," he described as an acid refreshing drink of little or no intoxicating quality. "Joala," on the other hand, more properly known as Kafir beer, was generally made with the object of producing drink of the greatest intoxicating strength attainable by native manufacture. It was used purposely to produce its toxic effects and was drunk in large quantities till the stomach was quite distended. It had a stupefying effect and in addition produced violent headaches and indigestion, even when not mixed with spirits, which was often done. Probably drugs such as bhang were frequently added to these native drinks for purposes of intoxication

and this accounted for much of the evil produced by them 3 Distilled liquors Mr H H Mann, M Sc, had furnished some valuable particulars as to native spirits manufactured in India Some of the o prepared in Assam, for instance, were particularly injurious, containing large quantities of fusel oil and other specially poisonous ingredients, in some cases about 20 times as much as would be found in a properly matured Scotch whisky This he attributed to want of supervision by the Government and the fact that the spirit was not allowed to mature In Cape Colony a pernicious form of brandy was made from grapes known as "Cape smoke" Samples of this were said to have been found to contain copper sulphate and it appeared to be intended particularly for native consumption In West Africa immense quantities of potato spirit manufactured in Germany for the purpose, formed the largest part of the trade of Great Britain as well as of France and Germany with the West African natives This spirit was frequently shipped in a concentrated form containing about 80 per cent of alcohol and some samples of this were found to contain as much as 4 per cent of fusel oil Trade gin and rum, as they were called, could have but one use—viz, the intoxication of the native No respectable European would ever touch them and they had been known to be used for mixing with paint instead of turpentine They were used principally on the occasion of funerals and at festivals The West Africans were naturally a sober people and they did not want the drink but were too weak to resist it if taste for drink had been acquired Drunkenness was not so easily noticed among the Africans as they drank at home and not at public bars, so they were able to sleep off the effects before coming before the public On the occasion of festivals, however, drunkenness was sometimes very wide spread

GLASGOW MEDICO CHIRURGICAL SOCIETY—A meeting of this society was held on Oct 7th Dr David Newman, the President, being in the chair—Dr T K Monro showed a case of Sporadic Cretinism The patient was a female, aged 23 years She was born in England in a large manufacturing town and it was only when she was unable to speak or to walk at the age of 12 months that any abnormality was suspected She had never been able to speak intelligibly She made no attempt to walk till she was six years old and she could scarcely be said to walk even yet She was able to feed herself with a spoon and to recognise her friends but was otherwise almost devoid of intelligence In the region of the thyroid there was a strip of tissue in front of the trachea almost as thick as a piece of coarse thread, this might perhaps represent the gland It was found that seven grains of thyroidenum siccum in two days were the maximum dose that could be taken with impunity and under this treatment her height increased from 41 to 43 inches in less than three months—Dr J H Nicoll showed specimens from a series of 13 cases in which the vermiform appendix was on operation found in an abnormal site—Dr Nicoll also showed a large number of calculi successfully removed by operation The calculi were of varying nature and origin—salivary, intestinal, pancreatic biliary, renal, urethral, vesical, and prostatic—Dr Nicoll also showed a case of Hydrocephalus treated by meningeal drainage and two cases of Mastoidectomy with preliminary occlusion of the internal jugular vein—Dr G H Edington read notes on the Treatment of Tuberculous Glands in the Neck by Excision

NEWPORT MEDICAL SOCIETY—The annual meeting of this society was held on Oct 5th There was a large attendence of members The reports of the honorary secretary and honorary treasurer, which showed that the society is in a most satisfactory condition both with regard to the work done and its financial position were read and adopted The following officials were elected for the ensuing year President Dr T Morrell Thomas President elect Mr W Jones Greer Ex President Dr J Howard Jones Honorary secretary and treasurer Dr R J Coulter Committee Mr O E B Marsh, Dr R J Paton, Mr W Bassett and Mr C Brooke Gratte

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AT the quarterly meeting of the directors of the Naval Medical Supplemental Fund held on Oct 11th Sir James N Dick K C B, being in the chair, the sum of £55 was distributed among the several applicants

Reviews and Notices of Books.

Handbook of Physiology By W D HALLIBURTON M D Lond F R S, Professor of Physiology, King's College, London Sixth edition With nearly 700 illustrations, including some coloured plates London John Murray 1904 Crown 8vo pp 902 Price 15s net

THE original lectures on Physiology delivered in the school of St Bartholomew's Hospital by Sir James (then Mr) Paget in 1844 and for several succeeding years constitute the foundation of this work The lectures were characterised by a novel and happy blending of histology and of pure physiology The fluency of the lecturer and the lucidity of his diction, together with the interest that he contrived to excite in the minds of his hearers, enthralled their attention and led to crowded benches The defect of the teaching, not remedied till many years had elapsed, was that it was purely oral and that no provision was made for practical work The notes made by Dr Kirkes of Paget's lectures were with some additions, especially in the subject of development, thrown into book form and published by him with the sanction and approval of Paget The work being well illustrated and written in simple language became very popular amongst students and went through many editions The present edition is the third since it was placed in the able hands of Dr Halliburton As might be expected, the chemical side of physiology, which in the earlier editions was much neglected, has been carefully brought up to date and the work throughout has been thoroughly revised

It is interesting, since it shows the increasing tendency to specialisation, to find that so distinguished a physiologist as Dr Halliburton has not disdained to ask for, and to obtain assistance in the difficult subject of hæmodynamics from Dr T Gregor Brodie who has devoted much attention to it Accordingly, we find good paragraphs upon the frequency of the heart's action and upon the work of the heart The output of the heart is estimated at 110 cubic centimetres per beat and the mean aortic pressure during the systole is calculated to be 156 centimetres of blood or 12 centimetres of mercury, a very different estimate from that originally made by Professor Volkmann Many chapters of the book are, of course not materially altered from the later editions Those that have undergone most revision relate to the circulation of the blood and the nervous system Thus, in regard to the still vexed question of the cause of the sounds of the heart, Dr Halliburton, in the first place, admits that the second sound is entirely due to the vibration consequent on the sudden stretching of the semilunar valves of the aorta and pulmonary artery, there are, however, reasons for considering that the first sound is only in part attributable to the stretching of the auriculo ventricular valves and in part to the contraction of the cardiac muscular fibres, he remarks that there is much to be said 'against the view that the cause of the first sound is entirely or even largely due to vibration of the auriculo ventricular valves' and the reasons which he assigns are that "any sound produced by the valves must be very quickly damped by the high pressure acting on their ventricular surfaces only, whilst the "sustained character of the sound (throughout practically the whole of the ventricular systole) is, on the other hand, exactly what is to be expected if it is of muscular origin The argument that the extent to which the muscle sound contributes to the production of the first sound can be estimated from the sound heard in an isolated and empty heart is quite fallacious, since under these conditions the muscle is contracting against no resistance' This interesting question must therefore be

considered *sub judice* until some means are discovered of distinguishing the qualities of the two notes that are produced by the valvular and the muscular sounds respectively. It is stated that the work performed by the heart in the day is equal to that of a labourer working hard for two hours. Considerable additions have been made in the paragraphs dealing with the physics of the circulation and drawings are reproduced of Fick's kymograph as improved by Hering, and other forms of manometer as well as various recently devised instruments for determining the velocity of the blood in the vessels are given.

There are good drawings of Nissl's granules with the changes which they undergo during a discharge of energy, for it is certain that on examination of nerve cells made after an epileptic fit where much energy has been expended the Nissl granules will be found to have disappeared or to have broken up into a fine dust so that the cells stain more uniformly with basic dyes such as methylene blue. Hence M. Marinesco has applied the term kineto-plasm to the nucleo-proteid of which micro-chemical investigation has demonstrated Nissl's granules to be composed. Dr. Halliburton observes that it still remains doubtful whether the changes observed are due to a transformation associated with intense activity or whether they may not be caused by venosity of the blood. The cells are very sensitive to altered vascular conditions, anæmia, for instance, producing a similar change accompanied by swelling of the cell together with enlargement and in extreme cases extrusion of the nucleus. High fever (hyperpyrexia) causes a very similar change which is doubtless associated with the coagulation of the proteids of the cell protoplasm by the high temperature. The important general law formulated by van Gehuchten and Ramon y Cajal is here laid down that all nerve impulses are axipetal—that is, they pass towards the attachment of the axon by which they leave the body of the cell. In other words, the direction of an impulse is towards the body of the cell in the dendrons and away from it in the axons, but Dr. Halliburton notices a very striking exception viz., in the typical efferent root cells; here the impulse passes to the body of the cell by one axon from the periphery and away from it to the spinal cord by the other.

There is an interesting chapter on the vaso-motor nervous system in which the important researches that have been recently made upon this subject are summed up. Dr. Halliburton has thought it advisable to introduce a section on osmotic processes which hold so important a position in many of the phenomena of absorption, nutrition, and excretion. In the chapter on Respiration few additions have been found to be necessary but an instructive tracing is introduced showing very clearly the effects of asphyxia on the cardiac and respiratory systems respectively. Under the head of the Chemical Composition of the Body some introductory paragraphs have been added supplying the student with modern views on the constitution of the carbohydrates, alcohols, and ketones. A good account of the mammary glands and of the changes that take place in the gland cells during secretion is given and the results of inquiries of various observers into the electrical variations in glands are fully described. Dr. Halliburton has not overlooked the valuable observations on digestion made by the Russian physiologist Pawlow which were recently noticed in these columns, as well as those of Starling and Hamburger, all showing "a beautiful adjustment in the quantity and composition of the various juices to the kind of work they have to do," each step following in an orderly manner as the result of the previous changes. Important additions have been made in those sections which treat of the localisation of the functions of the brain and their restriction to definite motor and sensory areas, in regard to which, however, considerable differences of opinion still exist. The chapters on the Senses and upon Development have been revised. In conclusion, the student who purchases the treatise and thoroughly masters its contents will find himself possessed of sufficient physiological knowledge to comprehend the functions of the body in their relation to each other and to apply that knowledge in the practical work of the profession.

An Atlas of Human Anatomy for Students and Physicians. By Professor CARL TOLDT, M.D. Assisted by ALOIS D. ROSA, M.D. Translated from the third German edition by M. EDEN PAUL, M.D. Brux. Fourth Section: Splanchnology (Figs. 641 to 932 and Index). London: Rebman, Limited. 1904. Price 9*s.* 6*d.* net.

THIS seems to be an age of anatomical atlases and the publishers appear to be inspired by the sentiment, if not by something more tangible, which determined Madame d'Arconville (1720–1805) to arrange for the translation and publication of the famous work of Professor A. Monro of Edinburgh, "The Anatomy of the Human Bones and Nerves," which appeared under the title "Traité d'Ostéologie," Paris, 1759.

The student of medicine can learn much from the perusal of an excellent atlas, when it is used to recall and to reinforce impressions gained from actual dissection and inspections, more especially when these impressions may have become somewhat dim. The name of Professor Toldt is a guarantee of accuracy of detail as well as of artistic merit. This atlas has had already great success both in Austria and in Germany and perhaps its success has led to the production of other efforts in the same direction.

In the fourth section, on splanchnology, the histological illustrations are necessarily few; they are at once simple and effective. The emphasis is on the naked-eye anatomy. Some of the illustrations are in advance of those usually found in English works—e.g., Figs. 718 and 719, showing the duodenum with the orifices of the mucous glands in the common bile-duct and the ampulla of Vater, and Fig. 745 showing the interior of the gall-bladder.

The chapter dealing with the respiratory organs, their relation to the heart, their appearances, and relations in coronal and other sections of the trunk, is admirable and instructive. The plates and drawings illustrating the section on the uro-genital apparatus are equally good. Those plates showing the topographical anatomy of the thoracic and abdominal viscera perhaps contain a little too much detail. Still, nature made man a very complex organism and the truth has to be set forth as best we can with the aid of exact drawing and coloured boundaries. The appendix contains notes by the translator (pp. 538*a*–538*j*).

The quarto form gives the work a stately look and affords ample room for the "Kolossal" array of names (Latin and English equivalent) which describe—we cannot say adorn—each illustration. Still, the dotted line with a label in type at one end and the object at the other is necessary. Perhaps by his numerous notes the translator in his enthusiasm for his subject makes the array of print even more formidable. Possibly the "love he bears to learning," and anatomy in particular, is at fault.

Abernethy, as is well known, once said on seeing a great crowd of medical students assembled to commence their medical studies, "Good God, gentlemen, what is to become of you all!" Let anyone take a glance at a fully dissected part in this volume with its several items duly labeled and he can only say, "May Heaven help the already overburdened student and increase his receptive capacity." As to the array of knowledge depicted it makes us think

of the kindly teacher in the "Deserted Village" of Oliver Goldsmith—

"And still the wonder grew
That one small head could carry all he knew."

How does the head of the average medical student "carry" all that he is expected to know in these days? What is required of him is "prodigious" and anything pictorial or otherwise which will lighten his labours is to be welcomed.

Food Inspection and Analysis. By ALBERT E. LEACH, S.B., Analyst of the Massachusetts State Board of Health. New York: John Wiley and Sons; London. Chapman and Hall, Limited. 1904. Pp. 787. Price 31*s.* 6*d.*

INCIDENTALLY this comprehensive work on the subject of food inspection and analysis gives the reader a glimpse of the methods employed in the United States of America for ensuring the sale of pure and unadulterated food. The general subject is attacked with that thoroughness which is characteristic of those engaged in practical scientific matters in the United States. The Massachusetts State Board of Health in particular has been a pioneer in many branches of public health work. It was the first of all the States to enact pure food legislation and for 20 years it has adopted a well-established system of food inspection, prosecuting cases under its laws through the Food and Drug Department of the State Board of Health. Mr. Leach is the analyst to the Massachusetts State Board of Health and in view of the excellent work done at the instance of this board by its officers this volume will be read with considerable interest by those practically concerned in the administration of the food laws of this country. A point well worth attention in regard to administration is that in many instances in cases of prosecution there is practically no expense incurred for legal services. "Complaints are entered by the collector, or as he is termed inspector, who makes complaint not in his official capacity but as a citizen who under the law has been sold a food found to be adulterated and who is entitled to conduct his own case, which he does with the aid of the analyst and such other witnesses as he may see fit to employ. Experience is readily acquired by the inspector in conducting such cases in the lower police or municipal courts where they are first tried, and years ago the services of legal counsel in Massachusetts were dispensed with as superfluous."

There can be little doubt that in this country offences often go unpunished through the existence of a complex state of the law from which expert lawyers derive considerable advantage. Even our Lord Chief Justice has put such an elastic interpretation on the law as to declare that the object of the Sale of Food and Drugs Act is to prevent people from being poisoned, and on this ground he dismissed a case in which glucose had been substituted for cane sugar in the manufacture of marmalade. As a matter of fact, owing chiefly to the labours of THE LANCET Special Analytical Sanitary Commission, which was instituted by the founder of this journal in 1850, actually poisonous substances are now rarely purposely added to articles of food. The public analyst's task nowadays is to deal with the enormous amount of substitution and fraud which is practised. Occasionally he, of course, finds substances in food which are prejudicial to health, as in the case of certain preservatives and colouring matters.

It is interesting to note also that in the United States a more effective method than inflicting fines upon the offenders is employed. Mr. Leach states that there are three practical methods of suppressing the sale of adulterated foods—namely, by publication, by notification, and by prosecution, and these may be separately employed or used in connexion with each other according to the powers conferred by law on the commission, board, or official having in charge the enforcement of the law. Under the law of some States lists of adulterated foods with their brands and manufacturers' names and addresses are published and sometimes public lists are issued in addition of unadulterated brands. This, it seems to us, is an excellent plan and its application was suggested some years ago in a Bill before Parliament but unfortunately this particular clause was rejected. Mr. Leach says that this method has a decidedly beneficial effect in reducing the extent of adulteration, and we can well believe it, while it is a plan which involves less trouble and expense than any other method. A system of warning also proves salutary and to some extent this method is pursued in this country, though it is to be feared that it does not act as effectively as it might owing to the fines inflicted being so ridiculously small.

Mr. Leach's work is divided into 19 chapters. It is distinguished from most standard analytical works by a section on flesh foods and the inspection of meat. The author has taken great pains to include the best methods of analysis which are directed to the detection of adulteration. At the end of each chapter he gives copious references to the literature of the special subject treated. These references are practically international and add very much to the value of the work. In regard to antiseptics in food we learn from Mr. Leach that the condition of legislation, generally speaking, in the United States is in much the same position as it is in this country and in consequence it is difficult to maintain a complaint under the food laws. In Massachusetts special laws exist, however, under which it is required that in the case of all foods containing preservatives the name and percentage of such antiseptics as are used must appear plainly on labels on the packages. We should like to see the general principle of printing the description of an article of food enforced in this country. The public then would know at least what it was buying and the practice of deception would to a large extent be suppressed by such a legal requirement. The section on spirits is not very complete and the author appears to give no importance to the discrimination of pot still and patent still spirit. Here, again, all that need be demanded is an honest label. At the end of the work is an excellent series of plates illustrating the structure and appearance under the microscope of many articles of food.

The book is undoubtedly a standard work and English analysts will gain many a valuable hint from it as to the best analytical procedure to adopt in the detection of adulteration. The processes recounted bear evidence of the author's personal experience of them. He has drawn on the literature of the subject of all civilised countries and has thus been able to crystallise the analytical advances that have been made throughout the world. We can cordially recommend the work to all those who are concerned in the administration of our food laws.

LIBRARY TABLE.

The Human Sternum. Three Lectures delivered at the Royal College of Surgeons of England, November, 1903. By ANDREW MELVILLE PATERSON, M.D. Edin., Derby Professor of Anatomy in the University of Liverpool; Hunterian Professor at the Royal College of Surgeons of England. London: Published for the University Press of Liverpool by Williams and Norgate. Pp. 89, with bibliography and plates. Price 10*s.* net.—Professor Paterson publishes his Hunterian lectures in the form of a most readable and interesting monograph. The substance of his communication has already given, and will continue to give, rise to much controversy. His thesis is that the idea of vertebrate segmentation has been carried too far by its exponents. The accepted view of the morphology of the sternum is that it consists of elements termed sternebræ which are derived from the costal cartilages and are segmental in nature, each

sternebra with a pair of ribs and a vertebra constituting a typical body segment. Professor Paterson holds that the evidence for the origin of the sternum from rib elements is insufficient and, on the contrary, believes that the primary condition of the sternum is one in which it is associated with the shoulder girdle, whilst the costal connexions are later developments. In this strikingly heterodox view he claims the virtual support of T. J. Parker and Professor J. Oleland, the former of whom was perhaps the originator of the germ of the idea. The teratological argument based on the occurrence of fissured sternum is held to be disposed of by the following considerations: first, the great rarity of the occurrence of a true and complete fissure; and secondly, the possibility of an explanation based on the stretching of the foundation tissue of the bone by the expansion of the thoracic viscera, with consequent failure in ossification. The presence of ectopia cordis in the embryo chick is advanced as evidence of this process. A study of the foundation of the sternum in the pre-cartilaginous stage of formation demonstrates, according to the author, that it is intimately connected with the shoulder girdle and is quite distinct from the ribs. The ossific centres are of no morphological value, being merely influenced in their location by certain mechanical forces to which the bone is subjected. It must be admitted that Professor Paterson adduces considerable evidence both from the writings of others and from his own investigations to prove that the sternum originates as he describes and that its stage of development is always in advance of that of the ribs from which it is commonly supposed to be derived. In this contention he differs entirely from the classical opinion of Ruge, the great advocate of the costal origin of the bone. Ruge's deductions come in for severe criticism and it is suggested that the facts which he adduces may be open to quite a different interpretation. Enough has been said to indicate the scope of the work and Professor Paterson must congratulated on the way in which it has been presented illustrated. There is no doubt that the last word has been said on the subject.

Atlas und Grundriss der Haut-Krankheiten. (*Atlas of, and Introduction to, the Diseases of the Skin.*) By Dr. FRANZ MRACEK. Second much improved and enlarged edition. Munich: J. F. Lehmann. 1904. Pp. 284 and 115 Plates. Price 16 marks.—We have on many occasions in reviewing the series of medical handbooks issued by these publishers spoken in the highest terms of the usefulness of the works contained in the series and we have praised especially the admirable coloured illustrations. Few departments of medicine so well repay pictorial illustration and the coloured drawings reproduced in this work faithfully portray the conditions which they are intended to represent. To the large number of illustrations contained in the first edition have been added some 30 more, so that we find, indeed, a fairly extensive atlas of the diseases of the skin. The text gives a good account of the main affections of the skin but the most valuable part of the work is undoubtedly the series of plates.

Les Fractures de l'Humérus et du Fémur. (*The Fractures of the Humerus and of the Femur.*) By Dr. THEODORE KOCHER, Professor of Clinical Surgery at the University of Berne. Translated from the German by Dr. L. SENN, Chief of the Surgical Clinic at the University of Lausanne. With 105 figures and 36 plates. Genève: Henry Kündig. Paris: Félix Alcan. 1904. Pp. 286. Price 15 francs.—The publication of any work on surgery by Professor Kocher must excite the interest and attention of every surgeon and as the medical men in this country who read French are much more numerous than those who read German this translation into the former tongue must make the work available to many who otherwise would have been unable to peruse it. The author tells us in his preface that the present work does not claim to have exhausted the subjects which he deals with but he hopes later to say more. The work is based on 20 years' study of the cases in the surgical clinic at Berne and Professor Kocher has not hesitated to devise new names for conditions which have not hitherto been adequately differentiated. Even though the volume is devoted to fractures of the humerus and femur only it deals really with fractures of the upper and lower ends of the humerus and the upper end of the femur and the full and careful consideration shown in discussing each fracture gives the reader great confidence in accepting the views of the author. The large number of illustrations of actual specimens increases materially the value of the work and many notes of cases are given also. Dr. Senn's translation is good.

THE HUXLEY MEMORIAL LECTURE.

THE fifth annual Huxley Memorial Lecture was delivered at Burlington House, London, on Oct. 7th before the Anthropological Institute of Great Britain and Ireland by Dr. J. Deniker, President of the Anthropological Society of Paris. Mr. H. Balfour, the President of the institute, was in the chair. In illustration of the address, which was delivered in French, a large number of fine lantern pictures were shown.

Dr. DENIKER, who is the first foreigner to receive the Huxley Memorial medal of the institute "for distinguished service to anthropology," said that Huxley was the first to make the twofold division of the peoples of Europe into xanthochroid, or light-complexioned, and melanochroid, or dark-complexioned, races. Beddoe and Broca were other pioneers in European ethnographical research. To the two races mentioned above a third was soon added—the Mediterranean race—and he (Dr. Deniker) had in 1870 made a further step by dividing the population of Europe into six main races. For many years he had been collecting statistics concerning the stature, colour of eyes andh air, and head measurements of the various nationalities, and now, in spite of certain lacunæ, some of which he regretted to observe occurred in Britain, he was able to say that he possessed data covering the whole of Europe.

In dealing with head measurements he first enunciated his own classification of types according to the cephalic index or ratio obtained by reducing the greatest breadth of head to a percentage of the extreme length. In other words, the breadth of the head is divided by the length and the quotient multiplied by 100. In each class these ratios were as follows:—

Hyperdolichocephalic (very long-headed) ...	73·0—75·9.
Dolichocephalic (long-headed)	76·0—77·9.
Sub-dolichocephalic (moderately long-headed)	78·0—79·9.
Mesocephalic (medium-headed)	80·0—81·9.
Sub-brachycephalic (moderately short-headed)	82·0—83·9.
Brachycephalic (short-headed)	84·0—85·9.
Hyperbrachycephalic (very short-headed) ...	86·0—88·9.

He then went on to show that Europe could be divided into four regions—namely, (1) a region of long-headed people with medium-headed areas in the north-west; (2) a region in the south-west characterised by even greater length of head; (3) a very short-headed region in western central Europe and in the immediate west of the Balkan peninsula; and (4) a region comprising Russia and Poland subdivided into three, moderately long-headed in the centre and medium-headed on the east and west. The first group was, on the whole, distinguished by tall stature and fair complexion and the second by short or medium stature and brown complexion. He next proceeded to the subject of stature. The great mass of his data was compiled from measurements of conscripts, but by an ingenious method the data could be modified so that they represented fairly the typical stature of the male population. In Europe there were no people of very short stature, according to the classification invented by Topinard (under 1600 millimetres, or 63 inches); on the other hand,

this region of the earth's surface was distinguished by the tallest race known—namely, the highlanders of Scotland Hence for the purpose of this lecture he would speak of statures ranging between 1650 and 1675 millimetres as medium, those below these measurements as short, and those above as tall Tall statures were, with a very few exceptions, particularly well represented in the north-west; the rest of the population of Europe was again with certain exceptions, chiefly in the Balkan peninsula, of medium or short stature People of medium stature were found grouped round the regions where the tall peoples occurred, and connected the tall races of the north with those of the south Short statures he divided into three groups, eastern, western, and southern, and showed how the eastern zone communicated by narrow "channels" with other centres of short stature The limits of the southern group practically coincided with those of the Ibero insular race

In grouping the peoples of Europe with regard to colour of complexion, eyes and hair, he had taken as the basis of his classification the brunette type (eyes and hair dark brown or black) as the most easy of recognition Those peoples among whom were found from 17 to 30 per cent of brunettes may be called intermediate Where less than 17 per cent occurred the population was termed blonde, where more than 30 per cent occurred it was termed dark According to this grouping the two extremes were the Swedish area with 3 per cent of brunette type and Italy with 70 per cent of brunette type North Europe was mainly blonde, South Europe dark, and Central Europe intermediate He traced the southern limit of the blonde races through the various countries (showing that it nowhere reached further south than the latitude of 50°) and also the more irregular northern limit of the dark peoples In the intermediate zone blonde areas were rare (one of them occurred in South England—i e, Berkshire, Oxfordshire, Hampshire, Sussex, and Middlesex), while dark areas were fairly numerous but individually very small Intermediate areas in the blonde zone were only found in the British Isles, but in the dark zone they were fairly frequent in Western Europe From these data and certain other considerations relating to shape of face and nose, character of hair, and other peculiarities he had been confirmed in his theory that the present population of Europe is composed of the following six main races

1 The first race was blonde, wavy-haired, long headed, and very tall, with a long face, and a straight prominent nose, it was designated as the northern race because its modern representatives were confined almost exclusively to North Europe This was the Cymric race of Broca, the Germanic or Reihengraber race of German authors, the Teutonic race of Ripley, or the Homo Europaeus of Lapouge

2 This race was blonde, straight-haired, moderately short headed, and of short stature, the face was broad and square and the nose often retroussé, it was designated as the Eastern race, since its principal home was in Eastern Europe

3 This race was dark complexioned, with hair sometimes curly, long-headed, of very short stature, and with a straight or retroussé nose; it was designated as the Ibero-insular race. This was the Mediterranean race, or Homo Mediterraniensis of certain authors, found chiefly in the Iberian peninsula and the islands of the Western Mediterranean

4 This race was dark complexioned, very short and round headed, of short stature, with a round face, broad nose, and thick-set body; it was designated as the Cevenole or Western race This type occurred in its greatest purity in the extreme West of Europe, though it was found sporadically elsewhere This was the race called variously by other authors Celtic, Celto-Ligurian, Celto Slavonic, Sarmatian, Rhetian, Ligurian, or Homo Alpinus

5 This race was very dark complexioned, moderately long-headed, and fairly tall, it was designated as the Littoral, or Atlanto Mediterranean race, situated on the coast of the Mediterranean from Gibraltar to the Tiber and in occasional groups on the Atlantic littoral, but never more than 150 miles from the sea

6 This race was dark complexioned, short-headed, and tall, having the nose slender and straight or arched, it was designated as the Adriatic or Dinaric race, which was found grouped round the Northern Adriatic, particularly in Bosnia, Dalmatia, Croatia, and the centre of the Balkan peninsula.

After a vote of thanks proposed by Mr E W. BRABROOK, C B, and seconded by Professor GOWLAND, the Huxley Memorial Medal was presented by the President to Dr Deniker

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 14, 1826.

BIOGRAPHY

Biographical Notice of the late Professor LAENNEC.[1]

Theophilus Réné Hyacinthe Laennec, was born at Quimper, in Basse Bretagne, in the year 1781 His earlier years were spent at Nantes with his uncle, who it is supposed infused into his nephew that desire for medical knowledge, the cultivation of which gave the latter such a high reputation

Young Laennec came to Paris in 1799, having been previously well instructed in the Greek and Latin languages He there followed closely the clinic of Corvisart, it was there where he first commenced his anatomico pathological researches, and acquired that knowledge of disease which he afterwards so successfully cultivated

In the year 1802, two great prizes in medicine and surgery were awarded to him by the Institute, and in 1803, he graduated His Thesis was intitled on the Doctrine of Hippocrates, as applied to practical medicine There, as in every other occasion, he held up the father of medicine in that light which has caused him to be so much and so justly venerated by every lover of science

At this period, pathological anatomy was not cultivated with that zeal which it is at the present day The numerous detached pathological observations on the different parts of the body, suggested to Laennec the idea of bringing them together, in order to deduce certain general conclusions, and establish from them certain fixed principles. Dupuytren formed about the same time the same idea And as the mode proposed by the one, was exactly the same as that laid down by the other, a dispute arose between these two illustrious pathologists, to whom the glory, as it is called, of arrangement should belong The dispute was terminated by both
This is t
morbid a
sciences
most, for besides the great part of his time which was spent in reading the ancient medical classics, he contributed to the Bibliothèque Medicale, in fact he was the Editor of it for many years It was at this time also, that he wrote several of the best papers on medicine, and morbid anatomy, which appeared in the first 23 volumes of the *Dictionnaire des Sciences Medicales*

He was nominated to the Hôpital Necker in 1816, and it was now that he first entertained the idea of *mediate auscultation*, and that he applied it to the diagnosis of disease. In 1819, the first edition of his work appeared, entitled "Sur l'Auscultation Mediate," but from the great exertions which the author required to make, his health became so seriously affected that he was obliged to go to the country for the purpose of recruiting his strength He remained there for two years At this time the stethoscope became the subject of considerable discussion, and even of ridicule

After the first edition of the *Traité de l' Auscultation Mediate* was nearly sold, Laennec commenced a second edition, which is in fact, so much improved, that it more deserves the name of a new work, than a new edition. This work, as many of our readers may know, was fortunately finished a short time previous to the commencement of Laennec's illness

Laennec had long suffered from a slight pain in his right side, and diarrhœa About the latter end of April, he was attacked with dyspnœa, accompanied with some slight fever, and left Paris for Kerlouarnec in Finistère He arrived there quite exhausted. His diarrhœa increased, and put a termination to his existence on the 13th of August, 1826, at the age of 45.

[1] Excerpts only have been transcribed. See also "Looking Back" in THE LANCET, August 20th, 1904, p 542, and Sept. 3rd, 1904, p 659

methods might be taken as an indication that they are of use but our previous survey of the therapeutics of tetanus will suggest that the patients might have recovered even had this treatment not been adopted, for the cases in which failure followed are even more numerous. Tracheotomy has been advocated from an entirely mistaken view of the mode of death. Death may result from asphyxia in tetanus, though more commonly it is due to exhaustion; but even if death is produced by asphyxia in this disease there is no spasm of the glottis, no interference with the entry of air; the asphyxia is caused by the tonic spasm of the respiratory muscles, so that all respiratory movement ceases and death necessarily follows. To relieve such a condition tracheotomy can be of no avail. It has been suggested that if a patient suffering from tetanus were bled and then saline solution were infused, much of the poison would be eliminated. In the number of THE LANCET above mentioned three cases were also recorded in which this mode of treatment was employed and two of them recovered but in neither of these was there any history of a wound and such "idiopathic" cases always have a low mortality. The method has nothing to recommend it. So hopeless seems every treatment advised that some have fallen back on simple rest and a few years ago DE RENZI claimed to have obtained four recoveries out of five cases by complete rest and silence. The patient's ears were stuffed with cotton-wool and he spoke not a word. Food was administered by a tube. While disinclined to attribute a very great therapeutic value to quietness and rest yet we think that they are important adjuncts to whatever other method of treatment be adopted, for a sudden noise often starts a spasm.

Our knowledge of the pathology of tetanus tells us that all the phenomena of the disease result from the absorption of a toxin from the wound where the anaerobic bacillus is located. The bacillus never invades the body generally. This toxin attacks the motor cells of the central nervous system and enters into a firm union with them, giving rise to violent contractions of the muscles with which they are connected. The tetanus antitoxin from which great results were expected has hardly fulfilled all that was anticipated from its employment. When brought into contact with the toxin it can, indeed, neutralise it but should the toxin have reached the motor cells the antitoxin is powerless to dissolve the union there formed. All circulating toxin is destroyed but the fixed toxin is beyond its power. The modification of the method of administration by which the antitoxin is injected into the skull is of doubtful value, the risk of the method is great, and satisfactory results are few in number. Yet in spite of its many failures we must depend mainly in the treatment of tetanus on the early administration of the antitoxin but our belief in the value of this serum must not blind us to the immense importance of the surgical treatment of the wound. The tetanus bacillus is entirely localised in the wound and its neighbourhood and therefore it is of the first importance that the wound should be rendered aseptic by excision or scraping, and the application of powerful antiseptics. Even amputation may be advisable in certain cases if seen early. It is true that this careful local surgical treatment will not touch the toxin already absorbed but it will prevent, if thoroughly performed, the absorption of any more toxin. To follow up the quantity already absorbed is the work of the antitetanic serum. To relieve pain and to diminish spasm some of the nerve sedatives already mentioned may reasonably be administered but it is useless to depend on them alone. Lastly, it is important to remember that prophylaxis should never be neglected. All wounds, especially those into which mud and soil have been rubbed, should be carefully cleansed and rendered aseptic by the means at the disposal of the surgeon. In this way the disease should be rendered less common and if a careful observation of such cases is maintained the earliest sign of tetanus might be recognised, so that treatment might be commenced at a time when, as our experience tells us, the chance of destroying the toxin is especially great. So widely spread is the tetanus bacillus that we can hardly hope ever to be able entirely to prevent infection but we may reasonably expect by attention to the means to which we have referred to reduce materially the present large number of fatal cases.

Playing Grounds.

THE *Times* of Sept. 28th contained a well-conceived letter from Mr. LESSER calling attention to the rapid absorption by the speculative builder of land in the vicinity of London and to the consequently ever-increasing difficulty of obtaining ground which could be used for the purpose of outdoor games. The writer did only justice to the action of the London County Council in setting apart portions of some of the open spaces under its control for cricket and football grounds and added what is undeniably true that the demand for pitches in these grounds exceeds the supply and that the players are crowded within very narrow limits. How true this is may be seen by anyone who visits Clapham Common or Brockwell Park during what may be described as recreation time. The pitches are so close, especially those given up to comparatively young children, that the players must often find some difficulty in distinguishing their own balls from those of their neighbours, and it is not uncommon to see a well-fielded cricket ball thrown up to the wrong wicket. Mr. LESSER'S letter was followed by another, from Sir ROBERT HUNTER, the chairman of the Hampstead Heath Extension Society, who points out that the 80 acres of field at Hendon which his society hopes to add to the Heath will afford a large number of pitches, accessible from many parts of London for twopence, and that a sum of £3000 has still to be collected in order to complete the purchase. The Heath itself is in most places too irregular or undulating for games, but the proposed addition is described as admirably suited for them, and we trust that Sir ROBERT HUNTER'S appeal will not be made in vain. Mr. LESSER made the revolutionary suggestion that portions of the Royal parks might be made available for games. He is probably right in supposing that there are portions which could be spared for this purpose without serious present inconvenience to anybody, but their allotment might be a dangerous example of the thin edge of the wedge. The neighbourhood of cricket pitches is often distinctly unsafe for children and pedestrians, as many of those who use the open spaces of the County Council could testify. We ourselves should regret to see the parks or Kensington Gardens diverted from the purposes, we had almost

said the legitimate purposes, to which they have so long been applied. When GEORGE I. asked what it would cost to plough and to cultivate Hyde Park he was told that it would cost three kingdoms; and the feeling in favour of its preservation would probably be quite as strong now as it was in those days. Moreover, the sacrifice would be a useless one.

We have great sympathy with the wants of the classes concerning whom Mr. LESSER and Sir ROBERT HUNTER have written, but these classes only touch the fringe of the subject. It is undoubtedly true that there are many thousands of London children who would benefit by regular recreation in the open air but who have at present no other playground than the streets, courts, and alleys of their immediate neighbourhood. Among these children there would be very few who could afford even Sir ROBERT HUNTER'S twopence, or who could afford it sufficiently often to derive any real benefit from the expenditure; and it is obvious that a playground so distant as to demand a twopenny fare would be quite outside the reach of those who were compelled to walk and who, if they visited it at all, could only do so at the cost of a degree of fatigue which would be prohibitory of games, or would render them more likely to be injurious than to be beneficial. The Hendon fields, and Clapham Common, and Brockwell Park, and even the small open space at Kennington, are admirable for the children living in their vicinity, and are duly appreciated if the numbers frequenting them may be taken as a test. But there are thousands of children who cannot reach them and it is for the physical training of these that provision of some kind should be afforded. The new educational authorities must be made to understand that the brains of children are but parts of their bodies and that their bodies must be cultivated if their brains are to be turned to good account. We may concede at once that nothing is so good for the physical health of the young as to be active in the open air; but, when the best is not attainable, we must strive for the best that can be attained. Nearly all London elementary schools have good playgrounds and the atmosphere in these playgrounds, if not as good as that of the country, is at least better than that of the rooms. If we are to deal at all with tendencies to physical degeneration among the poorest classes we must enforce systematic exercises which will require the chests to be well filled and the muscles to be well exercised; and for these purposes the playground should be as much under the control of the authorities as the class-room, and the lessons taught in the former as much under direction as those taught in the latter. In this way we may at least do something both to detect the earliest signs of physical degeneration and to arrest its progress when it appears; and we shall also prepare our pupils for the proper use and enjoyment of the open spaces if ever they are able to obtain access to them. Carefully conducted drilling and gymnastic training would, we believe, be of far more value to the poorest class of children than aimless "exercise," even in a better atmosphere, for it is certain that mere "games," as such, pursued without any particular teaching, have very little influence upon bodily development. We shall be heartily glad to see the multiplication of playgrounds in accessible situations, but we believe that with playgrounds, as with other things, it is quite possible to miss advantages from want of knowledge of the best methods of securing them.

Mr. LESSER, we are glad to see, does not advocate games for the half-starved. "The half-starved child belonging to the lowest stratum of the urban population must," he says, "be properly fed before it is in a fit state to benefit by physical recreation at all." He therefore dismisses this class from his consideration and only appeals for playgrounds for those who can afford to reach them and "pending the gradual removal of such evils as overcrowded homes, badly-chosen and badly-cooked food, and the other obstacles in the way of healthy physical development." The reservation serves chiefly to display the enormous complication of the subject and the difficulties that stand in the way of dealing with it successfully.

Annotations.

"Ne quid nimis."

THE SALE OF FOOD AND DRUGS ACT.

ACCORDING to the thirty-third annual report of the Local Government Board just issued the total number of samples analysed under the Sale of Food and Drugs Act during the official year 1903 was 78,077. This shows an increase of 5756 samples over the figures of the previous year. In spite of this further activity on the part of the authorities the return showed a smaller percentage of adulterated samples than in the previous year. In 1902 8·7 per cent. of the total samples analysed proved to be adulterated while in 1903 the percentage adulterated was 7·9. There was, however, an increase in the amount of adulterated samples of cocoa but a slight diminution in the number of samples of adulterated milk. We are glad to find that the Local Government Board has again urged upon several local authorities the desirability of increasing the number of samples taken for analysis. There are yet several districts in which the rate of sampling does not exceed 1 per 1000. The samples taken in every metropolitan borough exceeded 2 per 1000 of the population. London is at the head of the list again as regards the extent of adulteration of milk, the result showing 13·5 per cent. of samples condemned as against 10·7 per cent. in provincial towns and 8·5 per cent. in the country. There is little doubt that the adulteration of milk does not take place to any large extent in the country and the inference is that the water is added by the milk dealer in London. It is satisfactory to know that the fines imposed show an increase in individual cases though still in many instances the amounts inflicted are not calculated to check adulteration as effectually as larger sums would do. Penalties were imposed in 2777 cases, amounting in the aggregate to over £6000, excluding costs in most instances. The percentage of adulterated samples of drugs showed a trifling increase over that recorded in the previous year. Seidlitz powders continue to be adulterated to the extent of one-fifth of the samples procured for analysis. The percentage of spirits reported against in 1903 was 11·8 which, it is interesting to remark, is the lowest on record since the passing of the Act of 1875. The adulteration refers, however, only to the addition of water. In the next report we may expect to find the percentage of spirits reported against to be higher since proceedings are now taken against the sale of brandy adulterated with silent spirit. It is pointed out in the report that in the case of a large number of watered samples obtained

from licensed houses prosecutions cannot effectively be instituted on account of the common practice of exhibiting notices in the bars of such houses stating that all spirits sold in the establishment are diluted. Similar notices are now exhibited stating that the brandy sold cannot be guaranteed as consisting entirely of grape spirit. This method of evading the provisions of the Act should be overcome in some way and a publican should be summarily dealt with who refuses to supply a standard article. Of 769 samples of beer examined 17 were condemned on account of the presence of arsenic. But it is satisfactory to find that, according to the report of the analyst of Lancashire, the traces of arsenic which were still found in beer in 1902 owing to imperfect cleansing of the malt have now almost entirely disappeared "and beer in the county is now purer than it has probably been during the greater part of last century." It is obvious that steady consistent work is being done under the operation of the Sale of Food and Drugs Act and it is satisfactory to find that the public analysts are carrying out their share of the work as efficiently as the provisions of the Act enable them to do.

THE METROPOLITAN WATER-SUPPLY.

FROM the reports by Mr. C. Perrin (the examiner under the Metropolis Water Act, 1871) and Dr. T. E. Thorpe (the analyst) respectively, which are summarised in the annual report of the Local Government Board, it would appear that the year 1903 was unfavourable for the operations of the companies supplying water from the Thames and Lee owing to the continuous wet weather of the summer and autumn months. The water of the Thames was in good condition during 243 days but moderately discoloured and turbid during 52 days, whilst it was exceptionally muddy and turbid on 70 days of the year. The effect of floods and of the want of proper storage is shown in the increased amount of organic matter indicated in Dr. Thorpe's analyses. On several occasions it was evident that the companies were distributing water of unsatisfactory quality. Taking as a standard the mean amount of organic impurity in the Thames water delivered in 1868, a standard represented by the figure 1000, Dr. Thorpe states that in 1903 the figures for the Thames and Lee respectively were 1293 and 936 as compared with 822 and 558 in 1902. The mean proportion of organic matter in the Kent companies' water referred to the same standard was in 1903 only 215. These figures as compared with the figures for the preceding year indicate a marked inferiority of quality in the year's supply from both the Thames and the Lee. Similarly unsatisfactory results, it is remarked, have not been recorded for the Thames-derived water since 1872 or since 1880 for water derived from the Lee. The organic matter present is to a relatively large extent of vegetable origin. Very properly Dr. Thorpe draws attention to the importance of storage reservoirs, especially when the rivers are in bad condition. This view is abundantly supported by the fact that in the year 1903 the companies which possessed reservoirs of the greatest storage capacity delivered on the whole the best water. In spite, however, of the increased storage accommodation recently provided it is still obviously insufficient to cope with the exceptional conditions occasioned by frequent floods. As an indication of the heavy strain to which the companies' filters were subjected during a period of flood the waters delivered by three companies were then distinctly opalescent. The wet year 1903 has, in fact, conveyed many useful lessons on the question of the quality of the water-supply of London and Dr. Thorpe states that it has been possible to gain more definite information on this important subject in a single twelvemonth than could have been obtained by observations extending over many ordinary years. It is doubtful whether the health of London can be considered to be protected efficiently from water-borne disease so long as there is a liability to continuously wet seasons, while at the same time no provision is made for increased storage accommodation which such conditions demand. The experience of the year 1903 has at any rate led Dr. Thorpe to the following conclusions. 1. That from 16 to 18 days' storage is not sufficient and that it should be increased so that the several works could, if necessary, entirely exclude the river for at least 15 days and still have water available for some weeks' supply. 2. That all water ought regularly to be stored before use and that storage should not be treated, as it is at present in some cases, as a mere reserve or stand-by. 3. That when the river is in flood the proportion of soluble organic impurity in the water is always high and that merely excluding the top of a flood will not insure a supply which, even after storage and filtration, can be considered satisfactory in regard to colour and organic purity. 4. That when one flood follows another after a short interval of time it does not appear that the second flood brings down proportionally less organic impurity than the first and this observation is also generally true with regard to a succession of floods. 5. That if the best use could be made of the Thames as a source of supply in order to secure water which after storage and filtration should neither contain excessive amounts of organic matter nor have a marked high colour it would often be necessary to refrain altogether from abstracting water when the "natural flow" at Teddington exceeded 2,000,000,000 gallons per day. 6. That in order to remedy the present state of affairs it is very desirable that the Staines reservoirs, already constructed, should without delay be called into regular and systematic use. In a word, the health of London in relation to its water-supply is dependent upon both adequate storage and efficient filtration, and it is to be hoped that the new Metropolitan Water Board will see that these vital provisions are made secure.

MOTOR VEHICLES AND THE PUBLIC ROADS.

WHEN we wrote in a leading article on the above subject in THE LANCET of Sept. 24th, p. 900, that in prosecutions of motorists too much stress is laid on the actual pace of locomotion and too little on the exigencies of the roads in use, we referred to the fact that the majority of cases in the police-courts turn upon the question of the 20 miles per hour limit and not upon the question of whether the driving is of a reckless and dangerous character owing to the circumstances in which it is performed. The speed of a motor-car is one of the elements of its usefulness but as we observed in another passage the average motorist is a man of leisure, by whom speed is adopted for the pleasure and excitement to be derived from it, and he is too apt to underrate its inherent danger. In a letter published in the *Times* of Sept. 24th Lord Russell introduced the following paragraph which is characteristic of the mental attitude of many other drivers of motor-cars. He writes: "As to speed, the opposition to speed is entirely based on ignorance. A modern motor-car at 30 miles per hour on a main road is safer and more under control than the ordinary horse and trap going at eight miles per hour. The speed of a passing car is also very frequently exaggerated." The element of safety introduced by the mechanical perfection of the car diminishes, but does not nullify, the danger caused by its pace. The maximum rate of speed allowed by law is 20 miles per hour—that is to say, 1760 yards in 180 seconds, or a trifle less than ten yards per second—so that the motor-car which, in the language of "sprinters," "does level time," slightly exceeds the statutory pace. It may well be that a car going 20 miles per hour can be stopped in 20 yards more completely and more surely than a horse

trotting at ten miles per hour, but the motorist confronted by a sudden obstacle 20 yards in front of him will have two seconds wherein to do what is needed and the driver of the horse in a like case will have four In this we assume that the object to be avoided is inanimate or can do nothing to compass its own safety If, however, it is alive and is endowed with a certain amount of intelligence, whether it be a dog, a child, an adult foot passenger, or the driver of another vehicle, the horse will give it twice as much time as the motor car wherein to make up its mind and to put its resolution into force If we revert to Lord Russell s figures the case against the motor car is stronger still and in every fifth part of a second during which his chauffeur fails to observe or hesitates to act his car will shorten by three yards the distance between it and the point of danger In estimating, moreover, the causes of the motor car's unpopularity we must remember that most people, if it were their fate to be run down and if they could have their choice of evils, would prefer the horsed vehicle to the motor car, even apart from their respective speeds of 30 miles per hour and eight Whether the speed of motor cars is exaggerated or not can be estimated very fairly by anyone who owns a watch with a second hand He has only to stand still watch in hand when he sees a car coming at all rapidly towards him keep his eyes on his watch as it goes by, and note the spot which it has reached ten or 20 seconds after it has passed him If he then paces in the same direction 100 or 200 yards, according to the period he has selected, he will possibly not have made as scientifically exact an observation as motorists seem to desire in the witnesses against them, but he may also have formed the opinion that no such high pitch of accuracy is necessary He need not make his experiments in unfrequented main roads He will find food for them in urban and suburban thoroughfares where the sudden excursion of a child into the roadway or the approach of a second vehicle at a blind corner is an incident that may occur at any moment

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STUDIES FROM THE DEPARTMENT OF NEUROLOGY OF CORNELL UNIVERSITY

THE custom of publishing annual or periodical records of scientific work carried out in the pathological laboratories attached to universities in the United States of America has been a noteworthy and increasing feature in American medical literature during the last few years The Department of Neurology of the Cornell University, which is under the direction of Professor Charles Dana, has issued its first volume of 'Studies' It includes clinical and pathological researches completed in the department during the year 1904, much of which is published in the present volume for the first time Among the contributors we note the names of Professor Dana, Dr Ramsay Hunt Dr Joseph Fraenkel, and other well known workers in neurology The range of subjects treated is wide and the matters dealt with are important clinically, pathologically, and therapeutically Several of the papers are contributed by Professor Dana himself, and amongst those are four which deal respectively with special exercises for tabes dorsalis, the "formal" treatment of epilepsy, special exercises for aphasia, and special exercises for Parkinson s disease Experience after a good many years, says Professor Dana sometimes brings us to definite methods of treating certain diseases Thus in acute rheumatism there is a rather uniform agreement as to diet local application and internal medication The methods of treatment in tabes dorsalis migraine and chorea are fairly well fixed and the special objects to be obtained may be said to be established 'When such a stage in therapeutics is reached we possess what I would call a 'formal' or conventional method, this being the plan arrived at after long experience by many competent observers and producing very uniform results" It is now agreed that the best treatment of the average epileptic is that furnished by a farm colony life Thus under the headings of Regulation of Daily Life, Exercise and Bathing, Diet, Removal of Reflex Causes, and Medication Professor Dana details his scheme of the formal treatment of epilepsy Exercises for tabes are to be taken, he says, twice a day Ten different series of gymnastic movements of graduated difficulty are prescribed for the hands and arms and twelve for the lower limbs and body. When these are mastered, supplementary exercises are added for improving co ordination and skill of movements of the hands and fingers The systems of exercise for Parkinson s disease and for aphasia as described in the book are practical and have proved of benefit in Professor Dana's practice "The trouble in aphasia is not paralysis of the organs of articulation," he says, "but a lesion destroying the centres for the memory and ideas of language, hence the education should be one of memory rather than of muscular training of the articulatory organs The exercises should therefore be such as will tend to stimulate and to revive these memories through every possible agency" The patient will often have to practise his exercises constantly for two or three years and the progress at first will be very slow The exercises consist of repeating exclamatory words, monosyllabic words letters of the alphabet and figures, after which attempts to read daily a paragraph or part of a page should be attempted Copy books should be filled up for practice in handwriting daily The patient should allow himself to be read to for a short time twice a day and he should also try himself to read a quarter of a page every day Many other papers of interest are included in the present work Dr Ramsay Hunt treats of tumour of the frontal lobe of the brain, tuberculosis and tuberculous myelitis neuro fibromatosis and the pathology of paramyoclonus multiplex or Friedreich s disease The modern subject of cytodiagnosis in nervous disease is treated conjointly by Professor Dana and Dr F W Hastings Though yet in its infancy this method has already given valuable results in diagnosis and the operation of withdrawal of cerebro spinal fluid by the method of lumbar puncture although liable to give rise to disagreeable after-effects in the form of headache, is unattended with serious symptoms or sequelæ In a paper dealing with the cerebro spinal fluid Dr Fraenkel discusses the special subject of lymphocytosis A more or less marked increase of leucocytes was found to occur in tabes dorsalis, in general paralysis of the insane, in syphilis of the central nervous system and in multiple sclerosis the total number of cases investigated by Dr Fraenkel being 47 From a purely chemical standpoint as well as from the morphological, he says much yet remains to be investigated in regard to the cerebro spinal fluid The first volume of 'Studies of the Department of Neurology of Cornell University is a credit to Professor Dana and his colleagues and must add to the advancement of neurological science in America

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GUARDIANS AND THEIR MEDICAL OFFICERS

IT is unfortunately, often our lot to have to point out the devious ways which boards of guardians follow in their dealings with medical officers and we return to the charge with some faint hope that we may eventually see signs of improvement in this respect Our attention has been directed by a correspondent to two of the conditions said to be laid down by the guardians of the St George s (Hanover square) Union in regard to the appointment of a medical superintendent for their infirmary These conditions, which are to be subscribed to by intending applicants, are, as stated by our correspondent, as follows 1 He will be required to attend without extra fee any of the indoor

staff at the infirmary, workhouse, and children's home who may be sick *and report thereon to the guardians if required.* (The italics are ours.) 2. For every alleged lunatic examined by order of a justice of the peace the officer shall accept a fee not exceeding 10*s.* 6*d.* per case. It will be seen that two important issues are here raised—(*a*) the right of guardians to compel a medical man in their employ to divulge information which he has obtained in his professional capacity; and (*b*) the power of control which guardians can exercise over a magistrate in his administration of the lunacy laws. Our English law relating to professional secrecy is not laid down so explicitly as in France, for example, and its exposition here would occupy far too much of our space but it appears to us that any applicant for the post under the St. George's board who signs such an undertaking as is given above will, if he observes it, lay himself open to legal proceedings of an embarrassing character. As to the second condition we may point out, as we have several times done before, that Section 285 of the Lunacy Act of 1890, which deals with the fees payable to medical men for the examination of alleged lunatics, gives to boards of guardians no right whatever to dictate to a justice what is to be regarded as a suitable fee for certifying cases. The stipulation appears to us to be an improper one and it can only be rendered effective by bringing the cases before a magistrate who will forfeit his freedom of action in deference to the wishes of the board. We presume that if the magistrate makes an order for the payment of a guinea, as has been, we believe, the practice at St. George's and elsewhere, the officer appointed will have to hand over half the amount to the board's exchequer. If, on the other hand, the justice should for any reason direct a smaller sum than half a guinea to be paid the guardians would have no power, even if they had the will, to increase the amount to that sum. As between the guardians and their medical officer the case is therefore one of "heads we win, tails you lose," and we trust that this aspect of the matter will be appreciated by any intending applicants.

A CASE OF QUINTUPLETS.

THE birth of quintuplets is one of the curiosities of medical literature. In the *Journal of Obstetrics and Gynæcology of the British Empire* Professor G. C. Nijhoff of Groningen (Netherlands) has recorded the following case in which he examined the placenta. The account of the labour is furnished by Dr. de Blécourt who attended the woman in confinement. The mother was a robust woman, aged 34 years, and had been married for eight years. She had been delivered seven years before at term of a boy. The last period terminated on Jan. 20th, 1903. At the beginning of May there was a discharge of a small quantity of yellow fluid, at times tinged with blood. This ceased but returned in the beginning of July. Quickening was first felt early in June. On July 10th severe pains recurring every three minutes began at 8 A.M. At the height of the pains the bag of membranes was visible at the vulva. The fundus uteri was a hand's breadth above the umbilicus. Fœtal heart sounds were heard on both sides and in the middle of the abdomen. Vaginal examination showed the os completely distended and a small fœtal head in the first position. At 8.30, soon after the rupture of the membranes, an immature but living female child was born. Ten minutes later a second female in footling presentation followed. At 9 a male was born in vertex presentation and was soon followed by a female in footling presentation. Dr. de Blécourt was then surprised to find a fifth child concealed in a corner of the uterus and presenting transversely. Some minutes later a female was born in footling presentation. Before the birth of the fourth and fifth children no bag of waters was observed. The five children were all alive but survived for only one hour. At 9.30 the placenta was expelled after moderate pressure on the uterus. During the labour, and especially after the expulsion of the placenta, there was considerable hæmorrhage. The puerperium was practically normal. The children were of the development of six months and their weights ranged from 500 to 750 grammes. There was a single oval placenta measuring 18·5 by 25 centimetres and weighing 890 grammes. The uterine surface presented no more than the usual lobules. The five cords were inserted into distinct amniotic sacs. Three fœtuses were in one chorion and the remaining two were in separate choria. As the cords varied in thickness, shape, and arrangement of vessels it was not difficult to connect each fœtus with its own cord. The three sacs inclosed in a common chorion corresponded to the first, second, and fifth fœtuses. Thus these arose from one ovum and the other two from separate ova. It is of interest that the three fœtuses which arose from one ovum were of the same sex, while those that arose from separate ova were of different sexes. This would seem to support the view that the sex is predetermined in the ovum before fecundation, i.e., that there are male and female ova. Uniovular twins are always of the same sex. Therefore the quintuplets arose from three ova. In the woman's family several cases of multiple pregnancy had occurred. Her mother once had twins. Two uncles were the fathers of twins and an aunt was delivered of triplets. Professor Nijhoff refers to another Dutch case of quintuplets which occurred in 1719 and he has collected 27 cases from obstetrical literature between the years 1694 and 1900. The case recorded above may be instructively compared with one of quadruplets reported last week in our columns.[1] The fœtuses appeared to be of six and a half months development. Unlike the present case, each had a separate chorion and had therefore developed from one ovum.

A CENTRAL HOSPITAL BOARD FOR BRIGHTON.

AT an influential meeting recently held in Brighton it was resolved to unite for administrative purposes under a central board the various local hospitals—namely, those of Brighton and Hove and the Sussex County Hospital. There are seven such institutions in the district. Some are special hospitals and some are not but the lines of demarcation between their several spheres of activity are not precisely drawn and there is in consequence a good deal of overlapping. It has been felt for some time past that an endeavour should be made to classify and to distribute the work which falls to them so as to reduce expenditure while increasing efficiency. After several months of careful investigation and conference not limited to those immediately interested the Mayor of Brighton and his helpers have been able to set before the public meeting already referred to a basis for united action. The result is the adoption in principle of the central board. It is not intended that this body shall concern itself with the internal management of any hospital. It will act rather as an advisory committee and its expressed objects are: (1) to obviate overlapping of local medical charities; (2) to promote economy of administration, particularly in connexion with capital outlay on buildings; and (3) to prevent the abuse of medical charities by persons who are not proper objects of charitable assistance. As bearing upon the advantages to be expected from such an arrangement as the above the following facts are instructive. At the beginning of the year the Women's Hospital issued an appeal for a sum of £20,000 to build a new gynæcological department. After some deliberation with the local authorities and others it was decided to convert the wards

[1] THE LANCET, Oct. 8th, p. 1020.

the Sussex County Hospital devoted to children's diseases into a section for diseases of women and to transfer the children to the existing Children's Hospital. It is pointed out that the effects of redistribution in this case are the development of the Women's Hospital as a maternity institution, increased bed accommodation being available for this purpose, the parallel development of the Children's Hospital, the formation of an independent gynæcological department, and a saving of £20,000. Centralisation after this model has much to recommend it. It has thus far been shown to be inexpensive. It allows of autonomy, the comparative lack of which has proved fatal to less elastic systems. It owes its adoption to the support of all the medical charities which it is intended to serve, a recognition of its disinterested character. We shall watch its further progress with attention, and we may express the hope that success in the place of its origin will justify its extension to other populous areas.

A CASE OF EMPYEMA COMPLICATED BY AN ŒSOPHAGEAL FISTULA INTO THE PLEURA.

A CASE of some interest and considerable rarity is recorded by Dr. Alexander Jehle in the *Wiener Medicinische Wochenschrift*, No. 22, 1904. The patient was a child, aged two and a half years, who six weeks previously had suffered from a right-sided pneumonia. About ten days before admission into the Wilhelmina Hospital at Vienna the child developed fever, followed by emaciation and œdema of the lower extremities, but at no time was colic, hæmatemesis, or vomiting observed. On admission the pulse and temperature were normal and there were œdema of the feet and ankles and some degree of emaciation. Physical examination of the chest showed dulness with weak bronchial breathing on the right side, while the heart was displaced towards the left, the sounds being normal. Exploratory puncture proved the presence of pus from which a pure culture of the pneumococcus was obtained on bacteriological examination. The pleura was incised in the fifth intercostal space in the posterior axillary line and a considerable quantity of thick greenish-yellow odourless pus was evacuated. The course of the case was at first quite satisfactory, the œdema disappeared by the third day, the patient rapidly improved, and the empyema cavity became smaller, but about three weeks later the pus which escaped acquired a sour, pungent odour and contained small cheesy masses like curdled milk. This first suggested the presence of an œsophageal fistula, which was confirmed by the discovery of seeds in the pus escaping from the drainage-tube after their administration by the mouth, although fluid given by the mouth did not apparently escape into the pleura. The empyema continued to clear up and the œsophageal fistula closed for a time but later small particles of food were again found in the pus and this condition recurred at intervals for about four months, after which the œsophageal fistula closed permanently and the empyema operation wound healed shortly after, since which time the child had remained quite healthy. The explanation put forward by Dr. Jehle is that the communication between the œsophagus and the pleura was due to a mediastinal gland infected by the pneumococcus at the time of the pneumonia breaking down simultaneously into the pleura and the œsophagus and not to direct invasion of the œsophagus by the empyema, which he regards as negatived by the interval which elapsed between the opening of the empyema and the development of the fistula and by the narrowness of the track which only at times allowed food material to pass and even then in such small quantities as frequently to be recognisable only by chemical or microscopical examination. For treatment he recommends washing out the pleura with non-toxic solutions to clear away the escaped food materials, while the thoracic wound is to be kept open until the œsophageal fistula is closed. Invasion of the pleura by disease of the œsophagus is well known to occur and empyema and pneumothorax resulting from malignant disease of the œsophagus may be quoted as examples, but involvement of the œsophagus from the pleura is certainly a much more rare event notwithstanding Dr. Jehle's suggestion that such cases may occur more frequently than they are recognised.

CENTENARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE opening meeting of the centenary session of the Royal Medical and Chirurgical Society will be held at the Society's rooms, 20, Hanover-square, London, W., on Tuesday, Oct. 25th, at 8 30 P.M. The two following papers will be read—viz., the Pathology and Prevention of Secondary Parotitis, by Mr. Rupert T. H. Bucknall, and Symptomatic Parotitis, by Mr. B. N. Tebbs, and it is anticipated that there will be an exceptionally interesting discussion. The society always welcomes the presence of visitors who are invited to take part in the discussions. Persons intending to be present will recieve abstracts of the papers on application to the secretary, 20, Hanover-square, W. In many ways the society is showing that it is actuated by a progressive spirit. Formerly, even though a paper was received and approved for reading and read at a meeting of the society, it might not be considered worthy of a place in the Transactions and publication in any journal of any paper before the issue of the Transactions was prohibited. Wiser counsels have prevailed and at the present time all papers accepted for reading are published in the Transactions and authors are at liberty to publish their papers in medical or scientific periodicals immediately after they are read. On May 22nd, 1905, the centenary of the society will be celebrated and at the present time a committee is considering the arrangements for this celebration.

SIR ISAMBARD OWEN.

Sir Isambard Owen has been unanimously appointed principal of Armstrong College in the University of Durham in place of the late Dr. Gurney. Sir Isambard Owen, who entered upon the performance of his new duties on Oct. 8th, is well known in London, for he has till quite recently been physician and lecturer on the principles and practice of physic at St George's Hospital. He is, moreover, a Vice-Dean of the Faculty of Medicine of the University of London and an examiner in medicine for the Royal Army Medical Corps. He rendered yeoman service in the formation of the University of Wales and is at the present moment the senior deputy chancellor of that body. The great experience which he possesses in educational questions renders it peculiarly fitting that he should have been selected to be the principal of an institution such as Armstrong College and the city of Newcastle, together with the University of Durham, is to be congratulated upon having obtained the services of so able a principal for one of their foremost educational institutes.

THE BRITISH MEDICAL BENEVOLENT FUND.

IN a letter published in the *Times* of Sept. 30th Sir William Broadbent states that the British Medical Benevolent Fund is suffering considerably by reason of the prevailing financial depression and that the sum available for the relief of aged or invalided medical men and of widows and children left unprovided for is quite inadequate. He truly says that for a large proportion of medical men it is impossible to save much out of their earnings and if they die early, which is very common, their widows and children may be left on the border of destitution. The fund gives 120 annuities

their immigration man had learnt to cook his food; and from this we infer incidentally that the discovery of the bow and arrow considerably post-dated that of cookery.

It will help us to realise the conditions under which our precursors lived just before the [illegible] magine a small party of us—having by s[illegible] lost all knowledge of the arts, even that of kindling fire—to be transported to some uninhabited part of the world, entirely shut off from our fellow beings. Given such conditions we should have to rely solely upon mother wit for subsistence: having neither knives nor axes wherewith to fashion hunting weapons and no knowledge of the way to make lines or nets we could neither hunt nor fish and should be compelled to subsist upon wild roots, seeds, and fruits, while for animal food we should have to be content with insects, grubs, eggs, snails, lizards, and the like. In course of time our descendants would learn to fashion flint knives and hatchets and to make hunting weapons and fishing tackle, when the hunting stage would be entered upon and the supply of animal food considerably augmented. By thus, in imagination, placing ourselves in the position of those far-off ancestors we shall the better realise how much of our present enlightenment depends upon knowledge handed down from generation to generation and how comparatively little upon individual initiative.

Seeing that during the whole of the homo-simian and early hunting periods the food of the evolving man consisted of the natural products of the animal and vegetable kingdom—i.e., products unmodified by artificial means—one might be tempted to ask whether the diet could have undergone any great change during these periods—whether, in fact, except in being more animalised, the food of the huntsman just before he learned to cook differed greatly from that of the early homo-simian, and the question gathers force from the circumstance that the diet of the present-day pre-cibiculturists, in spite of their having attained to considerable refinement in cookery, presents certain striking resemblances to that of existing anthropoids, both the one and the other subsisting on insects, grubs, caterpillars, small reptiles, *et hoc genus omne*, and having not a few vegetable foods in common. That, however, the diet did actually change during the homo-simian and early hunting periods there can be no doubt, not only becoming more animalised but changing considerably in respect of the vegetable portion. These changes are to be explained by reference to the three great factors on which, as we have seen, the food of a species depends, and the influence of these on the diet of the evolving man during the periods under consideration must now engage our attention.

1. The influence of *the kind of food available* was felt chiefly in respect of vegetable food. During the long homo-simian period between the fifth and the tenth grades, when our precursors were in all probability limited to the Indo-African continent, the climate, slow though this is to alter, had ample opportunity of undergoing changes and this would lead to changes in vegetation and thus in the kind of vegetable food available. Again, when at the hunting-stage man began to spread over the entire habitable globe he was brought into relation with widely varying floras and this circumstance must have further tended to modify his vegetable food. At this time, too, sections of the race came to inhabit comparatively barren regions yielding a scanty supply of vegetable food and they were thus compelled to subsist mainly on the products of the chase. Indeed, it was, as we have seen, the discovery of the means of hunting which enabled man to spread from regions luxuriant in vegetation to lands which could not otherwise have supplied the necessary sustenance.

The influence of (2) *natural promptings* and of (3) the *mental and physical equipment* needful to give effect to those promptings may be taken together. The prompting of the evolving man being to get his food in as concentrated, digestible, and palatable a form as possible, his diet became, with increasing intelligence and skill, more and more animalised. One can understand how the homo-simian thus came to be more and more adept in procuring insects, grubs, eggs, small birds, lizards, mice, and the like, until with the help of weapons, traps, and dogs he was able to hunt the larger game and by means of various devices to fish the lakes and the streams. In this way the evolving man greatly increased his supply of animal food. No longer wholly dependent for it upon such small things as insects, grubs, mice, and lizards, which individually yield an insignificant supply of nutriment, the huntsman was able by destroying a single large animal to secure at a stroke an abundance of the animal food he craved, while the fisherman was often able to obtain a good supply of large fish such as salmon. Hence during the hunting and fishing period man became more carnivorous than vegetarian. Then it was that he developed to the full the instinct "to go and kill something" which, though called less and less into play with each succeeding diet epoch, yet breaks out at times even to this day with something like its pristine force, whether in the vagrant midnight poacher or in the multi-millionaire. Had it not been for the discovery of cooking and the introduction of agriculture, by means of which enormous quantities of highly nutritious and easily digestible vegetable foods were produced, there can be little doubt that man would to this day be mainly carnivorous

Whether fish entered into the dietary of the homo-simian it is impossible to say. Fresh water shell-fish have probably been consumed from very early times since they can be procured without much difficulty. The first fish caught were probably those of the fresh-water streams and lakes rather than the salt water varieties, but without the use of artificial devices, such as the damming up of streams, netting, and spearing, they could not be procured in any substantial quantity, and therefore one may assume that fish did not enter to an appreciable extent into the diet of our ancestors until the hunting period. Many rivers—e.g., those of North America—abound in salmon, and the tribes living in the neighbourhood have doubtless from the beginning of the hunting period feasted upon this dainty fish. Salt-water fish, it must be remembered, cannot be obtained in any quantity without the aid of some sort of sea craft, be it only a raft or a primitive canoe, and without artificial means, such as those afforded by lines, spears, and nets; and from what we know of the backwardness in respect of seacraft of certain primitive peoples still existing, it seems doubtful whether man engaged in deep-sea fishing much before the coctural period. He did not, in fact, venture upon the deep or learn to make nets until within comparatively recent times. Shell-fish found on the seashore, on the other hand, have entered into his dietary for long ages, possibly even into that of his homo-simian and anthropoid precursors, for we have seen that some of the monkeys subsist on crustacea and molluscs. The existence in various parts of the world of kitchen middens, made up chiefly of shells, shows how very largely the inhabitants of the sea-coast have subsisted on shell-fish in prehistoric times, and to this day they constitute a very acceptable form of food to the majority of mankind. It must not be supposed that with the large accession of animal food which came with the hunting and fishing period the smaller kinds of animals were wholly abandoned as food, for even the surviving pre-cibiculturists continue to consume insects (such as ants, spiders, grasshoppers, and beetles), caterpillars, grubs (as from decayed wood), ants' eggs, snails, lizards, frogs, snakes, birds' eggs, nestlings, and the smaller mammals, and these doubtless entered into the dietary of both the homo-simian and the early hunting man, as probably did also turtles and crustacea in certain districts. With the steady diminution in the vegetable diet which took place during the homo-simian and early hunting periods the coarser and less palatable varieties were naturally abandoned first. Most of the saccharides entered the stomach in the soluble form, either as the products of buccal digestion—dextrines and maltose—or as grape sugar, fruit sugar, or cane sugar—met with in fruits and honey. Gum was probably also consumed.

The preparation of vegetable food in precoctural times.—Whether precoctural man prepared his vegetable food in any way can only be matter of surmise. Did he, e.g., like his successors of the next period, extract from such articles as acorns and manioc their bitter and poisonous principles? One can well believe it possible, seeing that the method of doing this by maceration does not require any great ingenuity and that it would greatly increase his food-supply. Or did he perchance, like some primitive peoples now living, dry in the sun and pulverise any of his vegetable foods and thus save the work of his masticatory organs? This, again, does not seem unlikely, for it is a remarkable fact that although man in the early coctural period generally makes the flour he prepares from wild roots and seeds into cakes or puddings, he sometimes eats it raw. Or, again, had he discovered that the digestibility of some vegetable substances may be greatly increased by allowing them to decompose underground? It seems improbable that with the great intelligence which

of the later precocural period must have possessed he should not have subjected his vegetable food to some sort of preparition He must have noticed the effect of crushing seeds between stones of exposing vegetable substances to the sun, and of soaking them in water—all this a 15th made child would soon find out for himself Indeed, just as the cookery of food led the way to agriculture, so it seems highly probable that the preparation of it by sun drying, grinding, maceration, and similar processes led the way to the actual cooking of it—that man passed, in fact, through a primitive food preparition period before he entered on the period of cookery

(To be continued)

CHOLERA AND PLAGUE IN THE NEAR EAST

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH)

THE following notes are in continuation of my letter which appeared in THE LANCET of Sept 24th, p 913

No known case of cholera has occurred in Basra since August 19th That port was declared free of the disease on Sept 8th and the measures in force against it elsewhere were removed from that date At Bagdad the epidemic reached its maximum in the week ending Sept 3rd and has since declined, as shown by the following figures —

From August 21st to August 27th				180	cases	133	deaths
,,	,,	28th ,,	Sept 3rd	271	,,	174	,,
,,	Sept	4th ,,	,, 10th	212	,,	127	,,
,,	,,	11th ,,	,, 17th	166	,,	120	,,
,,	,,	18th ,,	,, 24th	61	,,	36	,,

The disease still remains epidemic, to a greater or less extent, at Mendelli, Kazmieh, Amara, Hay, and other places along the lower reaches of the Tigris and Euphrates It has recently shown a tendency to spread backwards up both these rivers Up the Tigris it has not yet been reported further north than Mossul, where an epidemic of some severity has occurred The following are the returns from Mossul since the first known cases on August 20th —

On August 20th				2	cases	1	death
From August 21st to August 25th				13	,,	14	deaths
,,	,,	25th ,,	Sept 2nd	45	,,	44	,,
,,	Sept	3rd ,,	,, 7th	68	,,	53	,,
,,	,,	8th ,,	,, 14th	162	,,	104	,,
,,	,,	15th ,,	,, 23rd	57	,,	52	,,

Outbreaks of less severity have occurred in the Mossul vilayet at Bazian and at Keui Sanjak, near the Persian frontier

Up the Euphrates cholera has recently spread as far as Deir Zor, the chief town of an independent *sanjak* of the same name This town is of importance as the principal halting place for caravans between Aleppo Mossul and Bagdad, it is about nine days' ride from Aleppo There were 13 cases of the disease here and six deaths between Sept 13th and 15th, and 37 cases with 21 deaths between the 16th and the 24th This outbreak to some extent threatens a reappearance of cholera in the Aleppo vilayet, which is believed to have been quite free from the disease—with the exception of one or two isolated cases in January and February—since last year At Khanikin, the Turkish frontier station on the Turco Persian frontier, occasional cases continue to occur But generally throughout the infected area of the Turkish provinces cholera is now declining The total numbers of cases and deaths reported from all parts in the week ending Sept 26th were only 312 and 230 respectively, as compared with 621 cases and 414 deaths in the preceding week

On the Persian side of the frontier, also, the cholera epidemic appears to be subsiding but the news received from that country is both scanty and contradictory Thus the Ottoman sanitary delegate at Tehran telegraphed on August 30th that the cholera had ceased in that city and was causing only isolated cases in other Persian towns But on the same date the Ottoman embassy at Tehran reported that four or five deaths from cholera were still occurring there daily The latter added that from seven to eight deaths were occurring weekly at Hamadan and that the disease had appeared at Sineh (? Sihna) Cholera, it will be recalled, was present in Sihna at the end of June, of its behaviour there since nothing is known The statement concerning Hamadan, moreover, is in contradiction with a telegraphic report received from the Ottoman consul at Kermanshah, then on a visit to Khanikin, on August 31st This telegram was as follows "No trace of cholera remains in the neighbourhoods of Hamadan, Beran Djeran, Sultanabad, and Nehavend, and for the last week neither cases nor deaths have occurred at Kermanshah and neighbourhood" On Sept 14th, however, the same authority reported that the disease had reappeared in the last named town and had caused 33 deaths there in six days, and on the 23rd he further reported the occurrence of 18 deaths between the 13th and the 20th of the month

On Sept 13th the Ottoman Consul General at Tiflis telegraphed that cholera had broken out at Tabriz and Maragha both in the north west angle of Persia and near to the Transcaucasian frontier At Lnzeli on the Caspian, according to Russian official reports, five deaths from cholera occurred before August 21st (8th) The same reports state that the disease had been severely epidemic at Kerbalet and that all pilgrimages had been prohibited in Persia The Russian delegate also informed the Ottoman Board of Health on Sept 6th that cholera was present in sporadic form at Resht, Astrabad and Meshed

Equal uncertainty prevails as to the extent of the cholera outbreaks in Transcaspia From communications made officially to the Ottoman Board of Health it appears that Merv has been somewhat severely visited by the disease A statement quoted from the Russian *Official Messenger* of Sept 11th (August 29th) affirms that cholera was imported to Merv by a sotnia of Cossacks coming from Kaachka close to the Persian frontier and that the disease had been introduced there by refugees from Meshed It will be recalled that in 1892 cholera was introduced to Russian territory by exactly the same route and in exactly the same manner The date of the first cases in either Kaachka or Merv is not stated, but up to August 24th (11th) as many as 53 cases with nine deaths had occurred in the garrison of Merv and 13 cases with nine deaths among the general population No information has since been received here as to the further progress of this outbreak

On Sept 13th the Ottoman consul at Tiflis telegraphed that cholera had reappeared at Baku two cases and one death having occurred there on the 9th (August 27th, Old Style) On the 16th two more cases, both fatal, were reported and on the 21st news was received of two deaths between the 16th and the 18th and one fresh case on the 20th Between the 20th and 24th three cases with one death, occurred, bringing the total number of known cases in Baku to eight So far as is known at present cholera has not spread in the Caucasus outside Baku but the Russian authorities are taking active measures to meet an eventual extension of the disease in the Caucasus and up the Volga

From other unofficial sources it may be gathered that the outbreak in Transcaspia is even more extensive than the above figures would indicate The *Russkii Vratch* states that the Russian Plague Commission has announced that in the week ending Sept 4th (August 22nd) 62 cases of cholera and 43 deaths occurred there and in the following week 77 cases and 48 deaths and that 36 Turcomans died from the disease in the *aouls* around Hassankuli on the shores of the Caspian between the 4th and the 11th of the month The number of cases could not be stated, as the Turcomans were hiding the sick The majority of the cases in the Transcaspian province had occurred in Merv and at Buram Ali near Merv The disease is also present in Tchikishlar, on the Caspian

Five cases of plague have recently occurred in Smyrna and this small outbreak presents some points of interest The first patient fell ill on Sept. 2nd and was first seen on the 5th He was a Jewish boy employed in a grocer's shop, the case was proved bacteriologically to be one of plague, the boy is recovering The second case was that of a Moslem man employed in the Custom House He fell ill on the 8th, he died on the 9th; the 5th and was first seen on the 8th and was first seen by the sanitary authorities until the 14th He died plague bacilli were demonstrated in the contents of the bubo after death A few dead rats had been seen in the Custom House some 15 or 20 days before his attack, but there is an exceptional occurrence or The third case was that of a taken ill on the 8th and was not seen by the sanitary authorities until the 14th He died

on the 16th; plague bacilli were demonstrated microscopically in the contents of the bubo. A doubtful case with some of the clinical symptoms of plague occurred in a diabetic subject on the 21st, but as microscopically, culturally, and by the inoculation of guinea-pigs plague bacilli could not be discovered in the bubo contents this case is not regarded as one of plague. The fourth case of plague was that of a Bosniac boy who had come to Smyrna from Kassaba three weeks before his attack. He was taken ill on the 20th and admitted to the Turkish Civil Hospital the same day. He died there on the 24th; a microscopical examination of the bubo contents after death showed plague bacilli. The fifth case was that of a Greek carter who was taken ill on the 21st and first seen on the 24th. Microscopical evidence was also obtained of the presence of plague bacilli in the bubo.

The source of infection in these cases is not known. It is noteworthy that isolated cases of plague occurred at Smyrna in September and in December, 1901; in January and in September, 1902; and in September and in December, 1903. This is therefore the fourth year in succession in which plague has appeared in this port in the month of September. Whether on each occasion the infection is freshly imported or whether there is some seasonal variation in the life-history of rats or in the kind of goods or passengers arriving at Smyrna to account for this curious fact there are at present no data to hand to determine.

A report was recently received to the effect that a disease believed to be plague was prevailing in the neighbourhood of Hamadan, in Persia, but this report has not been confirmed and is believed in Tehran to be unfounded.

No further information has been received as to the progress of the cholera outbreak in the Nejd province and on the Arabian shores of the Persian Gulf.

Constantinople, Sept. 30th.

PS.—Since writing the above news has been received from Baku showing that cholera is now rather seriously epidemic there. A telegram of Sept. 28th states that between the 24th and the 26th 41 cases and 29 deaths from the disease occurred there.

MEDICINE AND THE LAW.

A Criminal of Questionable Sanity.

A CASE recently heard by Mr. Garrett at the South-Western police-court seems to be one of those which are incomplete without careful inquiry into the mental condition of the person charged. The accused man was proved beyond all doubt to have committed acts of gross indecency before women walking through Battersea Park between eight and nine o'clock in the morning on their way to work. This conduct he had repeated so that, owing to complaints made, he was watched and handed over to the police. In consequence of a denial of this accusation made on his behalf, which put his character in issue, evidence was given that he had been engaged to teach music to two young girls and that his disgusting conduct towards them had caused him forcibly to be ejected from their father's house; that he had been employed in the office of the town clerk of Battersea until a day when three female attendants there had simultaneously complained of his abominable behaviour and he had been ordered to leave at once; that he had written in a filthy manner to a young girl inclosing obscene drawings; and that many other complaints of his conduct to women and girls besides those given in detail had been made. Mr. Garrett sentenced him to four months' imprisonment but his repeated acts were perpetrated in circumstances in which moral depravity seems hardly to account for them and in which complaint and punishment were alike so inevitable that his mental condition must have been at least open to question.

The Power to Recognise and to Identify.

In an annotation in THE LANCET of August 6th, p. 387, reference was made to the accurate memory for faces and personal peculiarities shown by a medical school attendant at St. Thomas's Hospital and to the development of this gift in porters at hospitals, clubs, and other institutions in which care has to be taken that only members are admitted. The inaccuracy of some others who claim to identify those with whom they have been slightly acquainted was commented upon and illustrated from the case of Mr. Adolf Beck. Another example of the inaccuracy of we in this respect was shown at the Clerkenwell police-cou Oct. 8th, when a woman positively identified as her hus an omnibus driver who, she swore, had married her in and deserted her after living with her for more than a Since the desertion she had seen her husband in 1896. produced his photograph in uniform and his discharge the army. The defendant swore that he was not the wom husband and that he had never been in the army corroborative evidence by his relatives showed that, u the whole of their testimony was perjured, it was impo that he could have married her as she stated. Acco to the magistrate the photograph, which must have 20 years old, to some extent resembled the acc which shows how little reliance can be placed in p graphs as evidence. An independent circumstance c borated the defendant and his relatives, for in the disch of the complainant's husband from the army it was rec that his height was then 5 feet 5¼ inches. He was likely to have grown since and the defendant mea 5 feet 8 inches. Two and three-quarter inches constit difference between the heights of two men which any obse person could hardly overlook, but a mistake by a woman a husband with whom she has cohabited for more than a seems at first sight extraordinary. This may have bee magistrate's opinion, for he did not dismiss the case advised the woman to withdraw her summons for deser It will be remembered, however, that a few months a was proved against a prisoner who had personated a me man that he had induced the wife to cohabit with hin that she had done so believing him to be her husband had left her shortly after marriage. In another r instance resembling that at Clerkenwell Sir Edward Fr a bench of Somersetshire magistrates had a clear proved before them when a man was called upon to cause why he should not contribute to his wife's sup She was an elderly woman who had been married to husband in 1873 and had lived with him for ten years since 1888 she had not even seen him. There was a phy peculiarity in the roof of the mouth of the defendant w her husband had had but in addition to other evidence w made it impossible that he could be the right man it shown that had the wife's story been correct he would been married to her when he was only 12 years of age.

Garbage-mongers Fined.

At Marylebone police-court on Oct. 8th George Pe pleaded guilty to being the owner of certain bacon exp for sale upon a stall and another man, Mumford by n pleaded guilty to having it in his possession for sale. former was fined £5 with 23*s*. costs, with the alternativ default of distress of one month's imprisonment; the la was fined £2 with 23*s*. costs, or in default of distress ordered to undergo 21 days' imprisonment. The circ stances narrated by Mr. Ricketts for the prosecution tinguished the case from others of the same kind, owin the determination of the defendants to carry on a traffic dangerous to the public until actually prevented. Pe had no shop in Marylebone but was tenant of a wareh for some time suspected by the sanitary authorities of b a storehouse for unsound food. It was watched but detectives were noticed and the bacon in question removed at night. Some of it was afterwards traced a stable and other portions to the stall where it was sei In view of the efforts made by these men to palm off t putrid goods upon their unhappy customers unless al lutely stopped by detection and active intervention penalties inflicted by Mr. Curtis Bennett do not appea err on the side of severity.

ROYAL PHOTOGRAPHIC SOCIETY.—At the Ro Photographic Society's forty-ninth annual exhibition, now progress at the New Gallery in Regent-street, London, Mr. C. Thurstan Holland of Liverpool shows a very inter ing series of radiographs of bone diseases for which receives the society's medal. The pictures very clearly pre the growths attendant upon exostosis, periostitis, necro sarcoma, and osteoma principally of the leg bones. G. H. Rodman also contributes some instructive radiogra of the mollusca which demonstrate the value of the x rays the study of the internal anatomy of shells. In addition the above, there are some interesting photo-micrographs exhibits of scientific interest which will appeal to those our readers who can pay a visit to the exhibition.

SEA-SICKNESS AND THE ATLANTIC PASSAGE.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Boston, Mass., U.S.A., Sept. 30th.

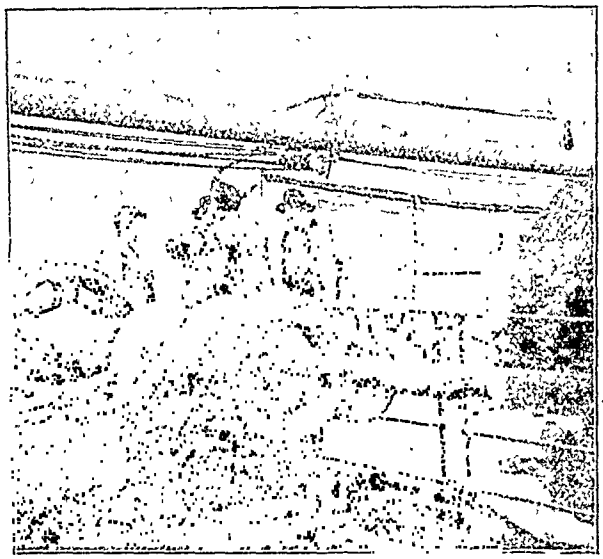
BEFORE attempting to describe some of the sanitary ervices on this side of the Atlantic perhaps a few words to the means available to cross the vast and turbulent ean may be appropriate. A curious evolution is taking lace. Many years ago, the *Great Eastern* having proved a ailure, only comparatively speaking small ships were built. o-day, however, larger and still larger ships are being roduced. At the same time a reaction is taking place gainst excessive speed. Everybody is not in a desperate urry and many prefer to give an extra day so as to travel n much greater comfort. Thus the Cunard Company ave three ships—the *Carpathia*, which has no saloon assengers, and the *Saxonia* and *Ivernia*, each having more han 200 first-class state-room berths. The peculiarity of hese three ships is, first, their immense size—namely, a ittle over 14,000 tons; secondly, they do not profess to cross he Atlantic in less than seven and a half days; but, thirdly, hat with their double keel, their size, and general build, hey do profess to be so steady that the chances of sea-ickness are reduced to a minimum. This statement is publicly and in advertisements passengers who bad sailors are advised to travel by these ships. he prevention of sea-sickness has always been a matter f great and practical interest. There is no doubt that he intercourse between nations would be more frequent nd intimate than it is but for the fear of sea-sickness. his, therefore, was an opportunity not to be lost, so I took a assage on board the *Ivernia* which is considered to be one of he largest and steadiest of ships afloat. Of its size there can e no doubt. We had 186 first-class and 232 second-class assengers. Then there were 1877 steerage passengers, and dding the crew to these figures there was a grand total of 2584 persons on board, so that we could be compared, not to floating hotel, but to a small town sailing across the seas. What, then, would happen with such a crowd if there should e tempestuous weather, and would there be less misery nd suffering on board the *Ivernia* than is generally he case in such circumstances? The weather proved propitious, not to the passengers, but to my desire of investigation.

We started on Sept. 13th at 4.30 P.M. from Liverpool and did not get abeam of the Boston lightship till 8.37 P.M. on Sept. 21st. No sooner did we advance well forward in the Irish Channel than, as a sailor remarked, we fell in with the tail end of the gale that had wrought much havoc in the British Channel from Dover all round the southern coasts. So rough was it that at Queenstown the tenders could not come out to us and we had to go into the harbour. We had gales and head winds and rough seas during the first four days after
weather may be
made 298 miles,
387 miles. It
enough to constitute a good test in regard to the question of sea-sickness. What then happened? In answer it may as well at once be confessed that there is no such thing as the absolute prevention of sea-sickness. Its frequency may be very considerably reduced, as also the number of victims, but given a gale in the Atlantic there is no ship conceivable that could remain without rolling or pitching when buffeted by such gigantic waves. Indeed, the most that can be hoped for is that it may not both roll and pitch at one and the same time. During the first days the *Ivernia* contented itself with pitching but ultimately it rolled as well. From Tuesday *night to the following Monday morning* we had tempestuous weather and at the dinner table there
many vacant seats. Personally
sea-sickness in my younger days
nly good sailor. In any case I did not miss a meal and had I eaten as much on shore as I ate at sea I should have been very ill indeed. This is the more noteworthy as I had crossed a few days previously from Ostend to Dover. There was no storm or gale but it was a nasty rough sea and many passengers were ill; consequently I did not enjoy my lunch on board. Though I was not ill, still I felt somewhat disturbed, but the point is that I was more inconvenienced during those few hours on the Channel than during four days of storms and gales on the Atlantic. This is no new experience. Many people have crossed the Atlantic without suffering and yet have been terribly sick in the short journey from Dover to Calais. The choppy nature of the Channel seas and the smallness of the boats result in jerks and leaps, together with simultaneous rolling and pitching, so that the passengers are churned up, and this is indeed difficult to endure. In a big transatlantic steamer the movement is more deliberate and regular. The question, however, is whether among transatlantic ships such vessels as the *Ivernia* give better *results so far as steadiness and freedom from sea-sickness are* concerned. In this respect I would say that rough weather, especially with head winds, must be hard to bear for the steerage passengers even on the *Ivernia*. Their deck is the first to be swept by the heavy seas. They are driven into their closely packed quarters below deck where many are vomiting in all directions, so that those who otherwise might have escaped sickness are rendered ill by the sights that surround them and the sour odours with which they are assailed. No
prevent this.
safe on the up
ment in watching the storm and this mental diversion, together with the bracing effects of the fresh strong wind, is an excellent preventive. Here I found several passengers who had fled from unfinished breakfasts but who quickly recovered when watching the waves leap on the fore part of the ship.

It was indeed a grand sight and all the more impressive when the force of the wind had blown the clouds away, so that the sun *shone brightly on the creamy* white foam with its ultramarine background of dark glossy sea. On several occasions quite a large party assembled on the fore part of the upper deck and beyond the canvas that is put up to shelter the promenade. Here, at the risk of an occasional douche of spray, we watched, and some attempted to photograph, the huge clouds of foam and spray and the solid but transparent blue sheets of water that occasionally leapt up, spread out, closed over and engulfed the prow of the ship. How to get a snapshot at this explosion of water and yet keep the lens dry was the principal problem. Then there was the difficulty of telling at what moment this great display would occur. It often happened that the ship rode successfully the most menacing of waves. It seemed wonderful to see this huge structure dip right down into the trough of the sea. The prow then appeared so far away and so far down. Yet it would come up again and rise above as high as it had been low down. Occasionally this part of the ship seemed to be wiped out altogether as a huge wave
greeted by wild shouts of delight
as the chance for a snapshot. It
d excitement of sport and none of
its cruelty. This made us forget the gale and its threats which were not pleasant, even if involving no greater disaster than sea-sickness.

The ship, in spite of its seaworthiness and huge size, both pitched and rolled, yet this was quite endurable, at least when compared to the cross-Channel motion. The movements of the *Ivernia* were solemn and dignified. We were swayed about but we were not flung about. The vibration caused by the engines never ceased but we had no sudden jerks. When very big waves came the ship gave a great heave but there was no sudden shock. We had the honour of rising high to ride huge mountainous Atlantic rollers; but even when gliding down on the other side of these watery elevations we did not experience that peculiar cold sens which in the Channel
Not even 14,000 tons
has such the Atlantic is really
of ship structure
rough, but the movement experienced is more endurable, a smaller proportion of passengers are ill, and the intensity of suffering is less. Where, however, *the most marked advantage* is experienced is during a moderate sea. Then it is that the ship does not roll at all. On these occasions several ships of 3000 and even 5000 tons passed us. They were rolling and pitching in a manner that must have made susceptible people on board very ill, but the *Ivernia* glided on with stately demeanour and the smaller waves then prevailing utterly failed to produce any impression on her. Thus it may be said that as the days of no wind or of slight or moderate wind constitute the large majority of the days of

the year even persons very susceptible to sea-sickness have a fair prospect of being able to cross the Atlantic with little or no inconvenience if they sail in a ship similar to the *Ivernia*. As a proof of the steadiness of the ship even in rough weather I found that the Jew steerage passengers were able to shave each other when standing on the deck. The weather was rough at the time and the ship swayed about a good deal, especially at the extreme end, which is given over to the Jewish passengers and situated near the propellers. But the movement was so regular that not only did these men shave each other without accident but I was able to photograph them in the act.



Steerage passengers shaving one another.

This, I take it, is a good demonstration of the steadiness of the ship. If to this is added the careful ventilation of the cabins so as to keep the air as fresh as possible it will be seen that something has been accomplished to lessen the frequency of sea-sickness. This ventilation does not depend merely on numerous apertures and air shafts, but a great number of electric fans are employed to pump the air in or out of the state cabins and also of the steerage. Altogether, therefore, I feel that the inconvenience of crossing the Atlantic during stormy weather is to a large extent overcome and that there is a distinct advantage in taking the slower, larger, and steadier boats.

MEDICAL SCHOOL DINNERS.

King's College Hospital.—The old students' dinner was held at the Hotel Cecil on Oct. 4th, Dr. Urban Pritchard being in the chair. It was largely attended, over 100 guests being present. Among those who attended were the Rev. A. C. Headlam, principal of the College, Sir John Cockburn and Dr. T. Buzzard, representing the Council of the College, the greater number of the members of the present staff, and a large number of old students representing various years, some going back to quite remote periods. The toast list was commendably short, so there was plenty of opportunity for that renewal of old acquaintanceship which constitutes the principal *raison d'être* for these gatherings. The toast of "The King" being duly honoured, the chairman proceeded to the toast of the evening, which was "King's College and King's College Hospital." The changes contemplated in the removal of the hospital to Camberwell were naturally uppermost in the minds of all present and allusions were made to the very admirable address on that subject which Dr. Buzzard had given earlier in the day at the College in his introductory address. The toast was responded to by the principal of the College. The toast of "The Chairman," proposed in a very happy speech by Mr. F. Richardson Cross, concluded the formal business of the evening, but the chairman, in thanking those present for the way in which the toast had been received, proposed the health of Dr. Norman Dalton who had been for m years secretary of the dinner committee and who was retiring from that position. This was drunk with mus honours and elicited a brief speech of thanks from Dalton. The arrangements for the dinner were all admir carried out and those present will be able to look back the evening with most pleasurable recollections.

The London Hospital.—The winter session of the Med College was inaugurated by a dinner held in the lib of the college on Oct. 3rd. A large gathering, inclu many members of the staff, was presided over by Dr. P Kidd. In proposing the toast of the evening Dr. referred to the great progress which the new buildings of hospital had made during the past year and expressed obligations of all "London" men to the untiring activit the house committee. He was glad to report a very s factory entry of new students. During the past year number of successes of "London" students at the versities and Royal Colleges had been unusually high; t included four gold medals and two scholarships at the versity of London. In athletics the "London" had had most successful year on record and the hospital at pre held no fewer than 11 of the challenge cups and shi offered for competition among the hospitals of London. Kidd mentioned the movement on foot to present Mr. M Scott, Warden of the London Hospital Medical College, his portrait in oils as an acknowledgment of his comple of 25 years' devoted service to the hospital and college. believed this proposal would meet with the warmest app of all past and present London Hospital students. Dr. concluded with a touching tribute to the memory of the Dr. T. Gilbart-Smith whose sudden death had come as a sad surprise.

St. Bartholomew's Hospital.—The annual dinner took on Oct. 3rd in the great hall of the hospital. Dr. Sa West occupied the chair and 151 persons were pre Dr. West proposed the toasts of "The King," "The P of Wales" (the president of the hospital), and "St. Bartl mew's Hospital Medical School." The senior alm present, Mr. Davis, replied. The toast of "The Gue was proposed by Mr. H. T. Butlin and responded t Sir Ernest Flower, M.P., honorary secretary of the Ap Fund, Sir A. W. Rücker, F.R.S., principal of the Unive of London, and the Dean of Christchurch, Oxford. Dyce Duckworth proposed the health of the chair who afterwards proposed the usual vote of thanks to honorary secretary of the dinner, Dr. W. P. Herringham.

St. George's Hospital.—The annual dinner of this sc was held on Oct. 1st at the Whitehall Rooms of the H Métropole, Dr. William Ewart being in the chair. About past and present students were present and the guests cluded Professor A. Macalister, F.R.S., of Cambridge, wh the afternoon delivered the introductory lecture. Mr. Fra Jaffrey, the Dean, alluded to the successes gained St. George's students. Mr. H. B. Drake and Mr. Ma obtained the first place in the examinations for the In Medical Service in January and August in this year, w Mr. S. H. Byam was placed first on the list for the Med Service of the Army. Mr. Clinton T. Dent had been appoi chief surgeon to the Metropolitan Police and the Orde the Saviour had been conferred upon Sir William Benn K.C.V.O., by the King of Greece. The entries at medical school were more numerous than had been the for some years past. The health of the new Director-Gen of the Medical Department of the Navy, Inspector-Gen Mackay Ellis, an old St. George's man, was warmly recei as was also the name of Dr. E. A. Wilson, who was on the surgeons on board the *Discovery*. A very succes and enjoyable evening was experienced by those present.

St. Thomas's Hospital.—The old students' dinner was at the Hotel Cecil on Oct. 1st, Mr. George E. Wherr Cambridge being in the chair. The students and mem of the hospital staff present numbered 144. After the u loyal toasts the chairman proposed the toast of " Hospital and Medical School." In a short speech he g his recollections of the hospital in the days when it temporarily located in the Surrey Gardens and of opening of the new buildings by Queen Victoria in 1 The treasurer, Mr. J. G. Wainwright, replied on behalf of hospital and gave an account of the extensive alterati which are in progress at present or are in contemplatio the near future. The new nursing home was rende necessary by the fact that the hospital originally provi for only 90 nurses and now 176 were required for the ordin

work of the hospital, and if other schemes came into effect these numbers would be still further increased Extensive alterations were in contemplation in the out-patient and other parts of the hospital so that a very large sum, £136,000, was involved in these new works He appealed to all old St Thomas's men to use their influence on behalf of their old hospital so as to obtain assistance for it at a time when large outlays were being incurred It was especially gratifying to the governors that Sir John Simon had remembered his old hospital in his will The dean, Mr J. H Fisher, in speaking on behalf of the medical school, gave a *resumé* of the events of the past academical year He mentioned the retirement of Dr. O. J Cullingworth and of Mr. F. O Abbott from the staff and the appointment of Mr E M Corner as assistant surgeon and of Mr H J Marriage to the ear department He also referred to the honours obtained during the past year which included the gold medal at the London M B examination and the Murchison medal, and alluded to the athletic record of the school, The health of the chairman was proposed by Dr J F Payne and drunk with musical honours The chairman briefly replied and the proceedings terminated after a very pleasant evening

University College, London—The annual dinner of the past and present students in the Faculty of Medicine was held at the Hotel Cecil on Oct 3rd The chair was taken by Mr John Tweedy, President of the Royal College of Surgeons of England There was an excellent attendance, covers being laid for upwards of 120 guests, including Mr Christopher Heath, Sir William Gowers, Dr. H Charlton Bastian, Dr Gregory Foster (principal of the College), Dr. F. T Roberts, Mr A E J Barker, Mr R J. Godlee, Sir Victor Horsley, Dr. H. R Spencer, Dr Norman Collie, F R S, Mr. Harry Littlewood, Dr. S H C Martin (dean of the faculty), and Dr Tempest Anderson The chairman, in proposing the toast of "The King," paid high tribute to the interest which His Majesty took in the welfare of the hospitals of London and in the Royal Colleges of Physicians of London and Surgeons of England, of both of which corporations he is a Honorary Fellow. Mr Littlewood proposed the toast of "The Medical Faculty of University College, London, and University College Hospital" and referred to the high traditions of the school as established by the efforts of its distinguished teachers, amongst whom the names of Sir William Jenner, Sir John Erichsen, Mr Marcus Beck, Sir John Williams, and Sir Thomas Barlow would always be remembered He also referred to the great development of medical education throughout the country which characterised recent years and to the birth of the new University of Leeds, which during the present week, at its inaugural ceremony, was about to confer honorary degrees on men distinguished by their enthusiasm for the advancement of education The toast was responded to Dr Martin and D- [illegible]
Univer [illegible]
the lat [illegible]
for the [illegible]
ment [illegible]
of Dr ([illegible]
of the new wards, the successful achievement of which had helped to make the new hospital a model of what such institutions should be Both speakers referred to Sir Donald Currie's timely and generous donation of £100,000 by which [illegible] of a school of [illegible] surgery, and [illegible] for providing suitable buildings for a nurses' home, the earlier medical studies—such as biology, chemistry, physics, anatomy, and physiology—would continue to be taught in the College Dr Foster, in an able speech, gave a history of university education in London and showed how the University of London by its reconstitution had assumed not only examining but also teaching functions and so had realised the hopes of Lord Brougham and others, no longer was teaching to be hampered by the requirements of examination, but examination would in the future be controlled by teaching As a first step in the reorganisation of the University of London the incorporation of University College, London, in the University would shortly take place and University College Hospital would in the future be governed independently of the College and the latter institution would be controlled by the Senate of the University through a local committee which would replace the present council of University College The teaching of the subjects of the medical curriculum would therefore go on as hitherto, the earlier ones in the College buildings and the later ones in the school of advanced medical studies and in the hospital Dr Foster, amid much applause, laid stress on the need for the [illegible] directory of the past stu[illegible] ough scattered all over the [illegible] cover their whereabouts and to enlist their sympathy and coöperation Dr Roberts, in an appreciative [illegible] the health of the chairman [illegible] in his reply, [illegible] ur which had been conferred upon him by being elected to the responsible position and recalled the names of other members of the hospital staff—Sir Richard Quain, Mr John Marshall, Sir John Erichsen, and Mr Christopher Heath—who had held the position before him Dr Roberts, Dr Mason, Dr. Stoddart, and Mr George Pernet contributed largely to the pleasure of the dinner by their musical performances and the proceedings terminated by a vote of thanks to the honorary secretaries, Mr Raymond Johnson and Dr. H Batty Shaw

Westminster Hospital—The annual dinner of the Medical School was held on Oct 3rd at the Frocadéro Restaurant, Piccadilly-circus The chair was taken by Dr W. Rivers Pollock, senior obstetric physician to the hospital. After the loyal toasts had been duly honoured the chairman proposed the toast "The Westminster Hospital Students, Past and Present," which was responded to by Major Arthur de Courcy Scanlan, R A M C, and Mr C G Browne Major Scanlan spoke of the unfailing kindness and welcome extended by members of the hospital staff to men such as himself when they revisited the hospital wards and thought that the ideal way of spending leave of absence from active service was to employ it in regular attendance in the various hospital departments The toast of the "Westminster Hospital and Medical School" was proposed by Mr J Hautenville Cope, one of the governors of the hospital and an active member of the house committee, this was responded to by the senior surgeon, Mr Charles Stonham, C.M G, and, in the unavoidable absence of Mr E Percy Paton (the Dean of the Medical School), by Dr Bertram L Abrahams, the Vice-Dean The toast of "The Chairman" was proposed by Dr T Colcott Fox. The toast of "The Secretary," Mr Arthur Evans, was then proposed by Dr Wills, who in the name of the hospital staff thanked him for the way in which all the arrangements of the dinner had been carried out Mr Evans replied During the dinner an excellent programme of music was rendered by Pitman's Viennese orchestra and afterwards songs were sung by Mr W C Nimmo, Dr Nimmo-Watson, and Mr Evans

ASYLUM REPORTS

Roxburgh, Berwick, and Selkirk District Asylum (Report for the year ending May 15th, 1904)—The average number of patients resident during the year was 327, comprising 141 males and 186 females The admissions during the year amounted to 58—viz, 30 males and 28 females Of these 44 were first admissions Dr J Carlyle Johnstone, the medical superintendent, states in his report that among the admissions a hereditary predisposition to mental disorder existed in 33 per cent and a suicidal tendency was observed in 48 per cent Some of the latter class of patients had made determined suicidal attempts before admission, five of them suffered from wounds in the throat, and one from the effects of poison In over 60 per cent of the cases more or less serious physical disease was present The number of patients discharged as recovered during the year [illegible] 12 females, or 6 1 per [illegible] The deaths during the [illegible] calculated on the same basis [illegible] cardiac disease, five to general paralysis of the insane, six to pulmonary and other forms of tuberculosis, and the rest to other causes "There has been more than the usual amount of sickness among the patients during the year and the general health of the community has not been satisfactory" Many cases of influenza and of erysipelas occurred, attacking both patients and staff The assistant medical officer, Dr F B Mitchell, had an attack of scarlet fever Fortunately there was no spread of the infection "One of the most unsatisfactory features in the bill of health," says Dr Johnstone, "is the excessive proportion of cases of pulmonary consumption, in many of which

the disease has been acquired after the patient's admission to the asylum. Consumption, unhappily, prevails in our public asylums to a lamentable extent and as compared with other institutions the Roxburgh District Asylum occupies an unenviable position. There can be no doubt that one of the most potent factors conducing to the spread of this disease in asylums is overcrowding, with consequent inefficient cubic space per patient, the insufficiency of the space in the sleeping-rooms being the most serious part of the evil." The overcrowded state of the asylum, which must be held as being the chief cause in the production of this preventable disease, makes it quite impossible to carry out any efficient system of isolation. The Commissioners in Lunacy state in their report that the asylum is much overcrowded. "In a comparatively small asylum this is undoubtedly a serious matter and there is further reason for concern in the fact that there appears to be no immediate prospect of relief, especially as regards the female division." Despite the overcrowding the amiable and generally contented condition of the majority of the patients was a testimony to the efficiency of the management. The arrangements for coping with an outbreak of fire have been carefully planned, "they appear to be capable of providing effectively against any ordinary occurrence of fire and nothing that could be foreseen has been left to chance." The medical registers and case-books were found to be kept correctly and well.

Glasgow District Asylum, Gartloch (Report for the year ending May 15th, 1904).—The average number of patients resident during the year was 636, comprising 331 males and 305 females. The admissions during the year amounted to 251—viz., 109 males and 142 females. Of these 156 were first admissions. Dr. W. A. Parker, the medical superintendent, states in his report that the character of the admissions continues to be very bad from the point of view of discharge and recovery. "No less than 162, or 64·5 per cent., of the admissions were ill over a year before or had been ill previously, and the other 35·5 per cent. included a proportion of hopeless senile cases, general paralytics, and other incurables. The bodily condition of the admissions as a whole was very poor." This year again, adds Dr. Parker, "alcohol stands, as usual, at the head of the list of causes of insanity. In not less than 60 cases it was apparently the prime factor in the causation of insanity, while it was the cause in combination with some other cause in 28 cases. Alcohol, then, was a main factor in no less than 88 of the admissions, or 35 per cent." When the question of hereditary predisposition is considered this is a serious state of matters. "A large number of these who do not become insane through drink are preparing a legacy for the future in the form of insane offspring to be cared for. During the last two years 96 cases [of insanity] have been admitted under 26 years of age. ..... In 54 of these cases there was a history of alcoholic excess in the direct line of descent, and in 51 of the 54 there was a record of parental excess in alcohol. ..... Parental alcoholic excess was present in 74 per cent. of cases under the age of 26 years. ..... It is difficult to say how this large proportion of alcohol-caused insanity can be lessened, but there is no doubt that the first step must be the awakening of the public generally to a realisation of the evil." The number of patients discharged as recovered during the year amounted to 84—viz., 29 males and 55 females, or 12·7 per cent. of the average number resident. The deaths during the year amounted to 66, or 10·3 per cent. as calculated on the same basis. Of the deaths three each were due to cardiac disease and epilepsy, four to senile decay, five to acute bronchitis, nine to pulmonary and other forms of tuberculosis, 17 to general paralysis of the insane, and the rest to other causes. "The percentage of recoverable mental cases in the sanatorium is very small and the lives of these helpless, hopeless, and useless folk will be indefinitely prolonged, thereby adding to the insane population and introducing a new fallacy in the estimation of the apparent growth of lunacy." The Commissioners in Lunacy state in their report that the asylum was throughout in good order and clean, that the patients were on the whole quiet and well-behaved, that the bedding and dormitories were in excellent condition, that the fire brigade was efficient in its work, and that the medical case-books were well and correctly kept. The committee of management states in its report that all the wards and dormitories of the asylum have been repainted, that a newly purchased farm is now under cultivation, and that the laying-out of the grounds immediately around the sanatorium for tuberculous patients has now been completed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8528 births and 4 deaths were registered during the week ending Oct. 8 The annual rate of mortality in these towns, which been 17·0, 16·0, and 15·6 per 1000 in the three preced weeks, further declined last week to 15·1 per 1000. London the death-rate was 13·9 per 1000, while it averag 15·6 per 1000 in the 75 other large towns. The low death-rates in these towns were 2·6 in Hornsey, 5·2 Handsworth (Staffs.), 8·4 in Aston Manor, 8·7 in Barro in-Furness, 9·0 in Devonport, 9·6 in Reading, 9·7 Bournemouth, and 9·8 in East Ham and in Walthamsto while the highest rates were 20·0 in Great Yarmou 20·2 in West Bromwich, 20·5 in Walsall, 20·7 Liverpool, 21·0 in Middlesbrough, 21·3 in Burnley a in Preston, 21·5 in Stockport, and 24·4 in Salford. T 4421 deaths in these towns last week included 615 wh were referred to the principal infectious diseases, agai 1190, 972, and 836 in the three preceding weeks; of th 615 deaths, 359 resulted from diarrhœa, 66 from diphthe 62 from measles, 53 from "fever" (principally enteri 32 from scarlet fever, 39 from whooping-cough, and f from small-pox. No deaths from any of these diseases w registered last week in Brighton, Bournemouth, Burton-o Trent, or Smethwick; among the other towns they cau the lowest death-rates in Willesden, Hornsey, Northampto and Aston Manor; and the highest rates in Walsall, Grimsby, Liverpool, Warrington, Salford, Oldham, Burnley, Blackburn, Hull, and Middlesbrough. The greatest proportional mortality from measles occurred in Birkenhead, Liverpool, Salford, and Huddersfield; from scarlet fever in Hanley and Halifax; from diphtheria in East Ham and Huddersfield; and from diarrhœa in Walsall, West Bromwich, Grimsby, Warrington, Bolton, Burnley, Blackburn, Preston, and Middlesbrough. The mortality from whooping-cough and from "fever" showed no marked excess in any of the large towns. Of the four fatal cases of small-pox registered in these towns last week, two belonged to Oldham, one to Bury, and one to Gateshead. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been five, five, and three at the end of the three preceding weeks, had further fallen to two at the end of last week; one new case was admitted last week, against none in either of the two preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital on Saturday last, Oct. 8th, was 2341, against 1929, 1969, and 2158 on the three preceding Saturdays; 409 new cases were admitted during the week, against 340, 284, and 406 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 141, 169, and 171 in the three preceding weeks, declined again last week to 166, but were 19 above the number in the corresponding period of the preceding year. The causes of 37, or 0·8 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Salford, Bradford, Leeds, Sheffield, Hull, Newcastle-on-Tyne, and in 47 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Manchester, Preston, Sunderland, and Tynemouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·5, 16·0, and 16·6 per 1000 in the three preceding weeks, declined again to 15·1 per 1000 during the week ending Oct. 8th and was equal to the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·4 in Aberdeen and 12·7 in Edinburgh to 20·2 in Greenock and 20·4 in Dundee. The 501 deaths in these towns included 36 which were referred to diarrhœa, 20 to whooping-cough, six to "fever," five to diphtheria, three to measles, and one to scarlet fever, but not any to small-pox. In all, 71 deaths resulted from these principal infectious diseases last week, against 103, 87, and 101 in the three preceding weeks. These 71 deaths were equal to an annual rate of 2·1 per 1000, which was also the mean rate last week from the same diseases in the 76 large

English towns. The fatal cases of diarrhœa, which had been 69, 60, and 58 in the three preceding weeks, further declined last week to 36, of which 18 were registered in Glasgow, eight in Edinburgh, eight in Dundee, and two in Paisley The deaths from whooping-cough, which had been 13, 17, and 23 in the three preceding weeks, declined again to 20 last week and included ten in Glasgow, four in Paisley, two in Edinburgh, two in Dundee, and two in Aberdeen The fatal cases of "fever," which had been eight, three, and 11 in the three preceding weeks, decreased last week to six, of which four occurred in Greenock. The deaths from diphtheria, which had been seven, one, and four in the three preceding weeks, rose again to five last week, and included three in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 55, 66, and 75 in the three preceding weeks, declined again last week to 73, but were 11 in excess of the number in the corresponding period of the preceding year. The causes of 13, or nearly 3 per cent, of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death rate in Dublin, which had been 16 8, 25 9, and 19 0 per 1000 in the three preceding weeks, further declined to 17 5 per 1000 during the week ending Oct 8th During the past four weeks the death-rate has averaged 19·8 per 1000, the rates during the same period being 14 3 in London and 14·9 in Edinburgh The 127 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 11 from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against 17, 34, and 19 in the three preceding weeks; of these, 10 resulted from diarrhœa three from whooping-cough, one from scarlet fever, and one from "fever," but not any from small-pox, measles, or diphtheria These 15 deaths were equal to an annual rate of 2·1 per 1000, the death rates last week from the principal infectious diseases being 1 2 in London and 1 7 in Edinburgh The fatal cases of diarrhœa, which had been 14, 23, and 16 in the three preceding weeks, further declined last week to ten The deaths from whooping cough, which had been four and one in the two [illegible] again to three last week. The [illegible] had been two, one, and two in [illegible] declined last week to one The 127 deaths in Dublin last week included 29 among children under one year of age and 30 among persons aged 60 years and upwards, the deaths of infants showed a considerable decline, while those of elderly persons were slightly in excess of the number in the preceding week Six inquest cases and three deaths from violence were registered, and 49, or more than a third, of the deaths occurred in public institutions. The cause of one, or 0 8 per cent, of the deaths was not certified

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Chaworth Louis Nolan has been placed on the Retired List, at his own request (dated Oct 6th, 1904).

The following appointments are notified —Fleet Surgeons G. A Smith to the *Pembroke* for Chatham Dockyard, A L Christie to the *Pembroke*, and H R Osborne to the *Mars* Staff Surgeons A. S G Bell to the *Spartan*, temporary, L. Bidwell to the *Hogue*, and H W G Green to the *Medea* Surgeons H E Fryer to the *Shearwater*, additional and on recommissioning, E R Townsend to the *Hogue*, G Moir, N. B V Jacob, H Stone, J D Keir, A B Marsh, J M Gordon, T E Blunt, and F E McCune to the *Five Queen*; H B German, G Nunn, G E Hamilton, J McCutcheon, and W H Horsfall to the *Vivid*, W L Hawkins, G O M Dickenson, and W T. Haydon to the *Wildfire*, D D Turner, A B Cox, B S Robson, A A Chancellor, and F R Featherstone to the *Pembroke*, all for disposal, and W P Hingston to the *Vivid*.

ROYAL ARMY MEDICAL CORPS

Lieutenant Colonel G J Coates is placed on temporary half-pay on account of ill health (dated Sept 26th, 1904)

Lieutenant Colonel R L Love and Lieutenant-Colonel J Gibson, on their return from South Africa are ordered to Ireland for duty. Major O A Lane assumes charge of the Station Hospital, Colchester Major A O C Watson takes over charge of the Station Hospital, Aberdeen Lieutenant L Bousfield, now at Aldershot, is ordered to London for duty at the Royal Army Medical College

ARMY MEDICAL RESERVE OF OFFICERS

Surgeon-Lieutenant J N Macmullin, 1st Herefordshire Rifle Volunteer Corps, to be Surgeon-Lieutenant (dated Oct 8th, 1904)

THE WAR IN THE FAR EAST AND INSANITY.

A telegram from Chifu, announcing the arrival there of two fugitives from Port Arthur recognised as insane, prompts a writer in the *Novosti* to say that these are the first cases in the present war of such a nature reported from the besieged city Hitherto cases of the kind had only been observed with the field army or in the fleet Dr O A Tchitchott who for many years has been the director of one of the largest asylums for the insane in the capital of Russia, he being a well known alienist, has, in conversation with the writer of the article, stated, after dwelling on the savage nature of the struggle at Port Arthur as being well calculated to induce insanity, "we all knew war was horrible but no one anticipated the horrors of this latest struggle A medical certificate from a private specialist is not valid to excuse a conscript from service An epileptic is only let go on the evidence of two witnesses of his having had epileptic fits besides the medical man's certificate Is it wonderful, then," he asks, "that in war such men fail to support the horrors of the [illegible] marvel, on the other hand, at the [illegible] man and his psychic vitality In [illegible] more prevalent than in this one [illegible] and the instruments of destruction were much less powerful There were many cases of insanity during the siege of Paris." He concludes his observations by explaining that insanity brought about by war conditions such as privation, fear, and the like is fairly easily curable compared with insanity resulting from wounds in the head

THE ARMY REORGANISATION SCHEME

Mr Arnold-Forster, Secretary of State for War, recently addressed a large audience at Sheffield With a great deal of what he said on that occasion most people will agree, just as they will freely admit that his scheme of army reform has many excellent points, but what they want is far more information a [illegible] present time Mr A [illegible] confidence regarding [illegible] but from all we can hear and learn it does not grow in public favour the more it is examined and considered We can only hope that eventually some reasonably complete and comprehensive scheme which shall commend itself to the nation and the services may be forthcoming and that medical science and army hygiene will have a fit and proper place in it when it does

DEATHS IN THE SERVICES

Lieutenant Colonel George Ryan, R A M C (retired), recently, at the age of 59 years He entered the service in 1868, became surgeon in [illegible] retired in 1889 with the [illegible] He served in the Zulu war [illegible]

THE WAR IN THE FAR EAST

Events have been progressing in the Far East with dramatic rapidity since we last wrote and at the present moment one of the greatest battles on record is being fought and possibly may even have been decided The opposing forces are on the largest scale and outnumber those that fought at Leipsic or Koniggratz From a military as well as a political point of view the situation is one of extraordinary interest and we shall soon know whether the enthusiasm which is said to have been kindled in Russia by General Kuropatkin's proclamation to his troops is to grow into a big flame of rejoicing or is only to be succeeded by a deepening of the gloom which, if report speaks truly, has been the more or less prevalent spirit in Russia during the present war. The brief rescript of the Mikado to his people urges on them the maintenance of a patient and steadfast frame of mind It does not apparently hold out any hope of an immediate end to the war According to official reports the health of the Russian army in Manchuria has always been good, but from other sources of information it is alleged that much sickness,

more especially from typhus and typhoid fever, is prevalent among the Russian troops; if so this would probably supply, apart even from the operation of any political causes, a strong reason for General Kuropatkin's taking immediate action.

Correspondence.

"Audi alteram partem."

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

To the Editors of THE LANCET.

SIRS,—I am afraid that "Coroner" has made a mistake. Unless I am in error in the case in question the man was pronounced to be dead on arrival at the hospital. That being so the house surgeon would have received the same fees as the "pathologist" did and so no additional expense was incurred. In the majority of cases where death occurs in the institution the ratepayers are, of course, put to extra expense by calling in Dr. Freyberger. There is a further point to which I should like to draw attention, and that is that apparently in every case of accidental death, even when it is perfectly obvious what the cause of death was, although perhaps the exact nature of the injuries is not apparent externally, Mr. Troutbeck orders Dr. Freyberger to make a necropsy, thus increasing the expenses by one guinea at least. In the North-west district of London it is, I believe, a rule with the coroner not to order a post-mortem examination when it is quite obvious that the deceased met his death as a result of the accident. This is a point that I hope some juryman will ask a question upon at some future date. For myself, I cannot be too thankful that I was house surgeon at St. Thomas's Hospital in the days of the late Mr. Braxton Hicks. Although "only just qualified" our evidence was accepted on all occasions.

I am, Sirs, yours faithfully,

F. HARCOURT GERVIS.

West Hampstead, N.W., Oct. 8th, 1904.

To the Editors of THE LANCET.

SIRS,—Probably the annotation referred to in the letter of "Coroner" in THE LANCET of Oct. 8th, p. 1046, quoted the observation of Mr. Troutbeck to the effect that no extra expense was caused to the rates by the employment of Dr. Freyberger but did not make upon it the comment suggested by "Coroner" for this reason. The staff of a hospital receive no fee for post-mortem examinations and for attendance at inquests when the deceased *has died in the hospital*, but in the particular case in question the body of the deceased, according to the report before me, had been brought to the hospital after death. This deprivation of fees has always seemed to me to be an unjust one, for the staff of a hospital perform voluntarily or are paid to perform duties in which giving evidence as to their patients' bodies after death is not included, and if they are taken away from their duties in order to give such evidence have to perform them at some other time just as other medical men have to do. Whatever principle, however, may underlie the provision of the Coroners Act which thus penalises the medical officers of hospitals the legislature can hardly have intended that they should gratuitously perform post-mortem examinations upon any dead body brought to the hospital by the police or other persons. At all events, it has not said that they must do so and there seems to be no reason why the literal interpretation of the section should be enlarged.

I am, Sirs, yours faithfully,

Oct. 10th, 1904. INNER TEMPLE.

RADIO-ACTIVE BODIES AND INSANITY.

To the Editors of THE LANCET.

SIRS,—Absence from town has prevented my seeing THE LANCET of Sept. 17th with your annotation dealing with the action of radium upon some of the lower animals and quoting the experiments of Dr. E. C. London of St. Petersburg upon frogs and mice, in which it is seen how fatal the effects of radio-active bodies may be upon animal life, for mice died in three days and frogs in from 13 to 14 days from such exposure. The effects of the x rays and the ultra-violet (Finsen's light) upon cell life and the control exercised by light over the nutrition of the cell are so peculiar that, for certain conditions under proper directions, the use of radiant light is recognised as among the most valuable of therapeutic remedies. Some time ago Sir James Crichton-Browne—whose interest in sanity in its widest sense is a matter of notoriety and whose brilliant gifts have ever been at the disposal of the most afflicted of humanity—wrote to me suggesting that some effort might be made to apply the less powerful radio-active bodies for the cure of general paralysis of the insane, a disease which has hitherto baffled all attempts at relief and which, in spite of the application of all present known remedies, has remained incurable. It was hoped either that the toxæmia or the plasmocytes or the general inflammatory condition causing or accompanying this disease might in some way be modified or arrested, but as radium might involve some risk Sir James Crichton-Browne suggested the use of thorium hydroxide With the deference due to his suggestion I consulted the high authority of Dr. J. Mackenzie Davidson, medical officer in charge of the Roentgen-ray department of the Royal London Ophthalmic Hospital and the Charing Cross Hospital, whose paper[1] upon the treatment of cases by radium bromide hinted that thorium hydroxide should be used for controlling microbic and cellular life in septic ulcers, and which greatly interested me. Dr. Davidson suggested that as thorium was a million times less active than radium, so a cap filled with the less active body and worn on the head for long periods might exercise some ameliorating or, at any rate, an alterative effect upon the conditions within the skull, and as thorium had none of the burning and destructive effects of the *beta* rays of radium it might possibly act upon the cerebral system through its penetrating powers which the *gamma* rays of radium were known to exercise. The experience of Dr. J. Gordon Sharp of Leeds,[2] acting upon a recommendation of Mr. Frederick Soddy, M.A.,[3] with a solution of thorium nitrate as an inhalation for lung disease, suggested that there might be some satisfactory result from this, although Dr. J. M. H. MacLeod,[4] assistant physician to the skin department in Charing Cross Hospital, records that two cases of lupus, for which he had tried thorium, were without apparent results. Starting with what my respected teacher, Sir Dyce Duckworth,[5] might be pleased to call doubtful wisdom but the best intentions I determined to break through the "tyranny of traditions" in respect to old approved remedies and to "pursue the novelty." I therefore selected A.B., a general paralytic admitted on March 16th, 1904, aged 28 years, a policeman, with the usual previous history of such cases, and had a specially devised cap made, as suggested by Dr. Davidson, into the closely quilted seams of which about 500 cubic centimetres of thorium hydroxide were placed, and this cap was worn night and day. The patient was of the melancholy type, an unpromising enough specimen, whose pupils were inactive to light, whose knee reflexes were increased, and whose habits—as occurs with the onset of dementia—were defective. The case was looked upon as unfavourable from the outset but he was discharged "recovered" on June 23rd, 1904, and subsequent reports of him have been most favourable. He himself dates the commencement of his progress from the time, soon after admission, when he wore the thorium hydroxide cap, which he felt very disinclined to leave behind him on his departure from the asylum and to which he attributes his "recovery."

I do not quote this case as furnishing any definite evidence of the curability of general paralysis of the insane. Those of us who see many cases know that some have long remissions, irrespective of any active treatment, and during which they are able to resume their place in the family circle and in society. Although I fully agree that what is new is not always true, I venture to think that where all is blank there is some room for the "pursuit of novelties" and that a tendency to try new remedies is not always lamentable and deserving of rebuke, but that it may on the other hand be a part of that "divine discontent" which is the temper essential to progress.—I am, Sirs, yours faithfully,

ROBERT JONES, M.D. Lond., F.R.C.S. Eng.

Claybury, Oct. 10th, 1904.

[1] Brit. Med. Jour., Jan. 23rd, 1904.
[2] Ibid., March 19th, 1904.
[3] Ibid., July 25th, 1903.
[4] Ibid., June 11th, 1904.
[5] Ibid.

A FORM OF SEPTIC CONJUNCTIVITIS FOUND IN ASSAM

To the Editors of THE LANCET

SIRS,—In THE LANCET of Nov 7th, 1903 p 1299 Mr R W Doyne described a variety of septic conjunctivitis which has certain peculiar features and which, as far as I know is not mentioned in any English text book on ophthalmology A very similar form of conjunctivitis is to be found among the coolies on the tea gardens of Upper Assam, and I have had three cases among Europeans during the last three months The symptoms present were similar to those described by Mr Doyne—namely the preliminary palpebral conjunctivitis, which, if neglected, tends to spread to the ocular conjunctiva, the infiltration of the lids a serio purulent discharge enlargement of pre auricular gland and resemblance to trachoma It appears to attack persons of all ages I have seen it in quite small children and old people and it is apparently not connected with unhealthy surroundings or weakly constitutions, as it occurs in healthy able bodied coolies, and my three European patients were strong and well The condition subsided in from two to six weeks, completely clearing up under nitrate of silver or sulphate of copper an eye shade and open air It is invariably uniocular and I have only twice seen it in both eyes, and these were cases which came to hospital late and which assumed a chronic character, being only cured after from two to three months' treatment As to the cause Mr Doyne suggests the possible infection from animals suffering from the mange and the likelihood of this source of infection in this country is very great Quite one third and possibly more, of the native dogs suffer from the mange and as these animals are in close contact with the coolies in the lines sleeping in their huts and running about among the children the possible source of contagion is evident Another way of infection may be from insects getting into the conjunctival sac and directly infecting the conjunctiva This form of conjunctivitis appears to be comparatively much more frequent at the commencement of the rains than during the rest of the year, and it is just before the rains that insects are most numerous and troublesome With regard to the European patients one owned a cat which was suffering from mange and which he had been in the habit of stroking, a second attributed the eye trouble to an insect which had got into the eye and caused some pain, while no cause could be assigned to the third

I am, Sirs, yours faithfully

HOWARD M STRATFORD

Dibrugarh Upper Assam Sept 15th 1904

THE CARE OF THE FEEBLE MINDED

To the Editors of THE LANCET

SIRS,—In THE LANCET of Oct 1st, p 963, you call attention to the efforts made by the National Association for the Feeble minded It is possible that some who are interested in this most useful work may not know that the Lancashire and Cheshire Society for the Permanent Care of the Feeble minded has for several years been most active in its efforts to help the mentally defective and to minimise the evils that must of necessity arise if they are allowed to mix freely with others The society was founded six years ago by Miss Dendy of Manchester who first studied the question thoroughly in all its bearings and then secured the help of a strong committee to carry out her suggestions There are at the present time two homes—one for boys (opened three years ago) and one for girls As more accommodation is urgently needed the committee contemplate further building as soon as possible [illegible] was Miss Dendy who first [illegible] cessity for *permanent* care of

I am, Sirs yours faithfully,

Manchester, Oct. 11th 1904 C CHRISTOPHER HEYWOOD

STATIC MACHINES AND X-RAY DERMATITIS

To the Editors of THE LANCET

[illegible] rays generated by a static machine has not yet been seen' As such a belief seems to be widespread and if acted on might lead to some deplorable results may I point out that it has absolutely no justification in fact? I have lately treated six patients with x rays produced by a mica plate static machine and in every case I have produced a definite reaction of the skin from an erythema accompanied by itching to a weeping dermatitis when I have intentionally pushed the treatment The cases were all different in nature, consisting of lupus of the face, rodent ulcer of the nose recurrent cancer of the breast, sarcoma of the skull, cancer of the uterus treated through the abdominal wall, and cancer of the sigmoid flexure becoming superficial I rarely give more than three exposures a week, I never put the target nearer than six inches from the skin, and I very seldom exceed ten minutes for the duration of a single exposure Dr W A Pusey in his book on x rays says

There is, in my opinion, not the slightest vestige of reason for the claim that x rays produced by a static machine are less liable to cause burns than those produced by coils I have used both coils and static machine for exciting an x ray tube and I am entirely of Dr Pusey's opinion I am Sirs yours faithfully,

ARTHUR J CLEVELAND, M D Lond, M R C P Lond

Norwich Oct 10th 1904

SOME POINTS IN THE PREVENTION OF EPIDEMIC DIARRHŒA

To the Editors of THE LANCET

SIRS —I will reply to Dr J I C Nash's questions in THE LANCET of Oct 8th p 1043 seriatim I meant epidemic diarrhœa in the cases to which I alluded 1 These cases are stated by the mothers to be wholly breast fed and this is from the nature of the case the only guarantee that they are 2 The mother's statement is the only guarantee 3 No Such instructions would not, and probably could not be carried out 4 No This is my fault—they ought to have been forbidden 5 No 6 Yes It would from the nature of the case be impossible to enforce the *régime* mentioned in questions 5 and 6 My patients were seen at a dispensary in one of the poorest districts of Liverpool, the houses of which are insanitary and there are numerous

India I became convinced [illegible] ces lying on the ground [illegible] at certain seasons are two [illegible] of the large amount of typhoid [illegible] of the [illegible] settle [illegible] food

My letter in THE LANCET of Oct 1st, p 981 was written, not to criticise Dr Nash's able letter, but for information which he has so kindly given and for which I thank him

I am Sirs yours faithfully,

Oct 8th 1904 PRACTITIONER

MANCHESTER

(FROM OUR OWN CORRESPONDENT)

The Water supply

ALTHOUGH rain has fallen and the supply of water has been cut off at night for some weeks, the quantity in the Longdendale reservoirs is sinking lower day by day and it is said that there is now only enough to last for 25 days The rainfall at Longdendale during the last week end was 0 75 of an inch but there was a greater consumption, as it was turned off at 8 P M instead of 7 1 M This extra hour meant an increase in consumption of more than 2 000 000 gallons on Sunday night last as compared with that of the previous Sunday Now that the drought has once broken the probability is that we shall once more tide over this difficulty without increased restrictions

Presentation of Whitworth Park to the City

On Oct 5th the Whitworth trustees made a formal transfer of Whitworth Park to the Manchester corporation The buildings appropriated to the art gallery and about five acres of land will remain the property of the Institute Galleries and the remainder of the park is transferred to the corporation in the form, for technical reasons, of a lease for 1000 years, subject to the annual rent of £10 The

purchase of the park cost originally £45,000 and up to the present, exclusive of the Institute Galleries and their immediate grounds, it has cost about £70,000. The chairman of the parks committee said that in 1887 the corporation had five parks and four playgrounds; now it has 13 parks and 33 recreation grounds with two nurseries for plants, the total area being 1277 acres. Before the end of the year the inclusion of Withington and Moss Side within the boundary of the city will add several more open spaces. The total number of parks and open spaces will then be about 60. Whitworth Park is opposite the new sites for the infirmary, the Southern Hospital, and the Eye Hospital, and this large open space, only divided from them by the width of Oxford-road, will be to them an inestimable advantage.

Preston Infirmary.

The solicitors of the late Mr. R. Calvert have informed the board of management of the Preston Royal Infirmary that he has bequeathed a sum of £5000 to the infirmary building committee. A few years ago he gave a similar sum towards the extension of the infirmary. It is stated also that he has left £2000 for the Home of the Blind at Fulwood and the same amount to the Walton-le-Dale Working Men's Institute.

A Plague of Gnats.

The Cheetham-hill and Higher Broughton districts have been visited by a plague of gnats and so dense was the cloud produced by them that the sky was darkened. Two or three Sundays ago they were a great annoyance to the people in the streets who were trying to beat them off with handkerchiefs or prayer-books. The districts named afford many facilities for the successful breeding of gnats in the numerous patches of stagnant water on the bits of waste ground and in the damp ashpits which are more or less abundant. Above the latter clouds of gnats may often be seen in sportive flight, each apparently keeping pretty much to itself and not mingling with that from the neighbouring ashpit. If the people object to the gnats they should take a lesson from the work done on the West Coast of Africa and look after the breeding places.

Home for Crippled Children.

On Oct. 1st the Lady Mayoress of Manchester opened a "country nursing home" which has been established by the Crippled Children's Help Society (Manchester and Salford) in Cross-lane, Rose-hill, Marple. It is a fairly large seven-roomed cottage which has been neatly furnished, chiefly by gifts from benevolent friends. It will accommodate nine children who during their stay of a fortnight will be under the charge of a trained nurse. About £200 a year will be required for its support. For some time past the society has sent crippled and invalid children to the country and the seaside where they were boarded-out at farms or cottages. There were disadvantages about this plan which will not exist in the house at Marple. Dr. H. Burton, medical officer of health of the Marple urban district, has kindly offered his medical assistance if it should be required.

A "Curious" Practice at St. Helens.

What is called in the report a curious, but what most people would call a dangerous, practice is said to be in vogue at St. Helens. The people are stated to put arsenic in the whitewash used in their houses to keep down vermin. One would like to know if the custom prevails extensively and what the result is on the health of the people, for it is pretty certain that minute particles of the limewash must become detached.

Need for the Teaching of Cleanliness.

The medical officer to the Clitheroe education committee reports that while most of the children are healthy and cleanly many are suffering, both bodily and mentally, from the ignorance of, or neglect by, parents of the most elementary laws of hygiene and unless the present generation of children receives instruction in these matters he sees no reason to think that the next generation of school children will be more fortunate than the present one. No doubt the same remark is applicable not only to Clitheroe but to a large proportion of the elementary schools throughout the country. It is a pity that together with the various "ologies," more or less useful or useless, now taught more stress is not laid on the benefits which follow the practice of the injunction—wash and be clean.

Oct. 11th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

University College, Cardiff.

THE session of the Faculty of Medicine of University College, Cardiff, was opened on Oct. 7th by an address from Dr. A. F. Dixon of Trinity College, Dublin, and formerly professor of anatomy at Cardiff. A course of lectures will begin in November upon school hygiene and will be addressed specially to school teachers, who will be granted certificates after sufficient examination in the subject. The lectures will be delivered by Dr. D. Hepburn, Dr. Edward Walford, Dr. William Williams, and Dr. H. A. Schólberg. A series of lectures to sanitary inspectors has been given by Dr. Walford and Dr. Williams for several years past. The lectures for this session commenced on Oct. 10th and will be continued twice weekly for four months. A course of theoretical instruction to midwives has been established in connexion with the College and the first lecture was delivered on Oct 4th by Dr. Ewen J. Maclean. It is expected that this course will be available for women residing not only in Glamorganshire but in the neighbouring counties.

Worcestershire Isolation Hospitals.

A recent report of Mr. G. H. Fosbroke, the medical officer of health to the Worcestershire county council, is of more than local interest and should be of service to the public health officers of those districts in which the erection of isolation hospitals is in contemplation. The cost per bed is given of three hospitals which have lately been erected in the county. In the hospital at Malvern with 22 beds this cost was £478, in that at Stourbridge with 30 beds it was £391, and in that at Bromsgrove with 40 beds it was £300. It appears that the Worcestershire and Staffordshire county councils have endeavoured to reduce the expenditure on such hospitals by obtaining from the Local Government Board sanction to substitute unclimbable fences for the continuous walling which the Board required to be placed around the grounds of isolation hospitals. The Board would not give way to these county councils but Mr. Fosbroke now quotes from a report of the West Riding sanitary committee in which it is stated that the Board has approved a proposal to surround the site of the Harrogate and Knaresborough joint hospital with a belt of trees and shrubbery with short lengths of walls. This concession of the Local Government Board will in some instances very considerably reduce the cost of isolation hospitals.

Tuberculosis in Cattle.

About a year ago a scheme of compensation for tuberculous cattle destroyed by sanitary authorities was arranged between a large number of butchers, cattle dealers, and farmers in South Wales and Monmouthshire. With respect to cattle sold at certain auctions the farmers agreed to pay into a compensation fund 1*s.* per head for cows and bullocks, 6*d.* for calves, and 2*d.* for pigs. The butchers were to receive three-fourths of the value where a whole carcass was condemned on account of tuberculosis and full value where only parts were condemned provided the animal was slaughtered within 14 days of purchase. Since the establishment of this scheme it has only been necessary to pay compensation in one instance and the fund has accumulated over £40. It has therefore been decided to discontinue the contributions and to renew them only if necessity should arise.

Employment of Children.

The Rhondda urban district council has for many months had under consideration by-laws for regulating the employment of children and has now submitted draft proposals to the Home Secretary. The first by-law as finally decided upon provides that no child under 11 years of age shall be employed by barbers, grocers, butchers, newsvendors, printers, drapers, or in any occupation involving the lifting, carrying, or removing anything so heavy as to be likely to cause injury to the child. An effort was unsuccessfully made by some members of the council to raise this age-limit to 13 years. Other by-laws limit the employment of children to 30 hours in each week and to seven hours daily. No child is to be employed on Sunday or later than 10 P.M., on week days. In barbers' shops or fried-fish shops the limit of time for

employment proposed is 20 hours in each week, of which seven hours may be on Saturday up to 9 o'clock at night It has not yet been decided whether these by laws when in force shall be administered by the health department, or by the police, or by the education committee

Lunatic Asylum for Newport

The asylum which is being erected by the Newport (Mon) corporation at Caerleon is approaching completion The Newport patients are at present treated in the county asylum at Abergavenny and Dr W E Nelis, who has been assistant medical officer at this asylum for 24 years, has been appointed medical superintendent at Caerleon

The Recent Accident on the Great Western Railway

Among the passengers in the terrible railway accident which occurred on Oct 1st near Llanelly were Dr Douglas A Reid, medical
Hepburn, dean of
Cardiff Dr Reid
[illegible] was travelling in the rear
[illegible] no injury and was able to
[illegible] ortunate passengers

Small pox in Shropshire

Two cases of small pox have occurred in the Salop and Montgomery county asylum at Bicton Heath, Shrewsbury

Appointment of a Colliery Surgeon

Dr Evan O Thomas of Llanybyther has been elected by the workmen of the Powell Dyffryn collieries at Aberaman as their surgeon

"Home of Peace for the Dying"

The Bishop of Exeter on Oct 10th dedicated the "Home of Peace for the Dying" at Exeter Through a munificent donation, Emsborough House, at Exeter, has been purchased and furnished for the purposes of the home and a suitable mortuary has been added Funds are needed for the annual support of the institution, and it is hoped that liberal subscriptions will be forthcoming so that the payments required from the patients shall be as small as possible

Oct 10th

IRELAND.

(FROM OUR OWN CORRESPONDENTS)

Royal Veterinary College of Ireland

THE opening meeting of the fifth session of the above college was held on Oct 5th in the theatre of the college Sir Christopher Nixon, President of the Board of Governors, who occupied the chair, distributed the prizes awarded at the recent examinations to the successful students

The Meath Hospital and County Dublin Infirmary

The inaugural address preparatory to the opening of the medical session was delivered by Professor F Conway Dwyer
[illegible] ified the
[illegible] y a large

Infantile Mortality in the North Dublin Workhouse

At a meeting of the board of guardians of the North Dublin union held on Oct 5th Dr E C Bigger, medical inspector of the Local Government Board, furnished a report in reference to the nursery of the workhouse from which it appears that out of a total of about 1000 infants received during the three years ending June 30th, 1904, there were no less than 396 deaths Dr Bigger declares this mortality to be entirely excessive even when allowance is made for the class of children received The report goes on to say that the place in which those infants are housed is insufficient to accommodate their number, is insufficiently ventilated, and built on the site of an old graveyard which was infested with rats There are generally between 60 and 70 inmates of this curious nursery, the nursing staff of which consists of one sister, two paid attendants, and about eight inmates during the day, while the night staff is limited to one trained nurse and two inmates It does not seem surprising that under the above conditions at least every third child who enters the nursery dies

Health of Belfast

At the meeting of the city corporation of Belfast held on Oct 4th it was reported that after a conference between the representatives of the Forster Green Hospital and the Lord Mayor it was decided before going further to have an interview with the Local Government Board This took place on Sept 23rd, when questions as to the cost of maintenance of patients and their admission and discharge were discussed Ultimately Mr T J Stafford, medical commissioner of the Local Government Board, advised that opinion of counsel should be taken on these matters In the meantime the Local Government Board has sanctioned a loan of £5000 for the purpose of purchasing the grounds and lands known as the Abbey to be used as an auxiliary workhouse for consumptive During the past four weeks the number of cases of infectious diseases notified have increased, being 275 (92 cases of typhoid fever 81 of simple continued fever 55 of scarlet fever 28 of erysipelas 13 of diphtheria, three of membranous croup, two of small pox, and one of puerperal fever) There were 92 deaths from zymotic disease, 75 from phthisis, and 50 from disease of the respiratory organs (making a total of 125 from the latter two causes)

The Belfast Maternity Hospital

The work in connection with the new Maternity Hospital is so far advanced that it has been possible to arrange to
[illegible] the wife of the Irish Chief
[illegible] is to take the principal part
[illegible] mittee is anxious that a small debt of £500 shall be wiped out before that interesting occasion in order that the charity may start free from debt Of the £9000 required for building the new hospital £8500 have already been contributed This hospital—established 103 years ago—in its enlarged and thoroughly modernised buildings will be of enormous advantage to the Belfast Medical School in the training in midwifery of students and nurses

The Belfast District Asylum

In reference to the difference of opinion between Mr W E Lilis (Local Government Board auditor) and the Belfast Asylum the following motion was unanimously passed at a meeting of the Asylum Board on Oct 10th —

That the committee of management of the Belfast District Lunatic Asylum having before them letters from the Local Government Board dated 21st and 29th ult relative to the non publication of Dr Lilis's report on the audit of the asylum accounts beg to inform the Local Government Board that the certified abstract of same was duly published on the 20th July last This committee after careful consideration of Dr Lilis's report feel that they would not be justified in publishing a document containing inaccurate and misleading statements respecting the

Oct 11th

PARIS

(FROM OUR OWN CORRESPONDENT)

Treatment of Phlebitis

As already mentioned in THE LANCET of August 13th, p 499, M Lucas Championnière at the last meeting of the Academy of Medicine before the recess gave an account of a new method of treating phlebitis This procedure, which he highly recommended, consisted in the employment of a form of gentle massage, quite different from muscular movement but sufficient to restore the circulation locally interrupted by the formation of blood clots which had created a permanent obstruction in the inflamed veins M Reynier did not agree with M Lucas Championnière on this subject and on Oct 4th, when the meetings were resumed he drew attention to the danger of embolism that existed whenever a vein contained a clot which was liable to be displaced when muscular contraction cooperated with the vascular tis a tergo He then described a case of the kind in which he himself was the patient Being confined to bed with pneumonia and on the fifteenth day of the

disease, but not suspecting that he suffered from phlebitis, he had occasion to rise. Immediately on returning to bed he had symptoms of embolism from which he fortunately recovered. One of his friends, after having for 30 days suffered from phlebitis of the saphena vein, was similarly affected. He had been told that he might get up but he had scarcely left his bed when he fell quite helpless. M. Reynier considered that in all cases of phlebitis the patient ought to be forbidden to make the least movement as long as the veins were painful and the clot was not organised. A distinction must be made between varicose veins otherwise normal and thrombosed veins. In a patient suffering from varix and old phlebitis massage might excite latent microbism. Massage often did more harm than good and medical observation has shown that it might cause further phlebitis which might kill the patient. In cases of phlebitis walking ought not to be permitted beyond a very limited extent; much walking produced tension of the nervous system and very painful cramps. Massage ought not to be permitted until after complete recovery from phlebitis.

Mosquitoes and Malaria in Madagascar.

At the same meeting of the Academy of Medicine M. Laveran presented a very important communication on this subject, with special reference to various particulars. He has observed among the natives the frequency of malaria in very young children, whose blood very often contained malaria parasites and who were therefore a frequent source of the disease. This prevalence of malaria in children was due partly to the circumstance that the symptoms of malaria were usually not well marked in them and partly to the difficulty of giving them quinine. A variety of causes favoured the dissemination of malaria. In the cultivation of rice, when the harvest was over the stalks were allowed to decay in stagnant water which thereby became a fertiliser for the next crop, but in the meantime acted as a focus of malaria by providing a breeding place for the anopheles. This system has been adopted by the Betsileo since the conquest, as it was more economical than the old method by which rice was grown in running water. The consequence was that malaria now made great havoc among the natives, although it used to be rare. Formerly also the people inhabited the high tablelands, but on account of the general security established since the conquest they have now come to live in the plains near their rice fields. There was therefore obviously an urgent necessity for enforcing in Madagascar special by-laws relative to rice cultivation, these by-laws being superadded to the general regulations for the prophylaxis of malaria. For instance, the rice fields ought to be allowed to become dry immediately after the harvest. All rice ought to be grown in running water and not in stagnant water. Dwelling houses ought to be at least two kilometres (a mile and a quarter) from the rice fields. The ordinary means of protection against anopheles bites, such as wire gauze, veils, and gloves, ought to be used at night by the work-people who ought also to take quinine as a preventive. General Gallieni has done a great deal in this respect. Quinine is freely distributed to the natives, with instructions to the effect that it ought to be taken not only for the treatment of patients but as a prophylactic. These measures, supplemented by others, would serve to check this terrible scourge which was ravaging Madagascar.

International Congress of the "Gouttes de Lait."

The first International Congress of the "Gouttes de Lait" (institutions for supplying milk to young infants) will be held at Fécamp from Oct. 28th to 30th. The subjects of discussion given in the programme are: (1) Barlow's disease (infantile scurvy); (2) gastro-enteritis and sterilised milk; and (3) legislation relative to the sale of milk. A meeting will be devoted to the reading and discussion of communications submitted by individual members.

Murderous Assault on a Medical Man.

Dr. Vallon, medical officer of the Saint Anne Lunatic Asylum, whilst making his usual visit on Oct. 4th was stabbed in the back of the neck by a lunatic. The weapon was a small knife, having a blade about one and a quarter inches long and very sharp, firmly fixed in a handle. The assailant was a dangerous man who had been twice convicted but had not been punished as Dr. Vallon had certified him to be of unsound mind. It fortunately seems probable that Dr. Vallon's wound will have no serious consequences.

Oct. 11th.

Obituary.

EDWARD WILLIAM ORTON, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death took place on Oct. 7th, after a long period of failing health, of Mr. Edward William Orton of Bedworth, where he was in practice for many years and held several appointments. Mr. Orton was educated at Queen's College, Birmingham, and obtained the L.R.C.P. Edin. and L.M. and M.R.C.S. Eng. in 1870. He was a member of the British Medical Association, an honorary member of the St. John Ambulance Association, a certifying factory surgeon, medical officer and public vaccinator of the Bedworth district of Foleshill Union, physician to the Bedworth almshouses, and acted as surgeon to several collieries in the district. He was at one time assistant physician at the Droitwich Lunatic Asylum and resident surgeon of the Birmingham Lying-in Hospital. Mr. Orton leaves a widow, a son (Mr. Lionel E Orton who has been practising with his father), and three daughters. The deceased took an active part in the affairs of his locality and was for many years a follower of the Atherstone pack of foxhounds. His brother, Mr. John Orton, M.R.C.S. Eng., of Foleshill, died within the last two years.

UMBERTO FLORA.

ONE of our Italian correspondents writes: The Tuscan school has lost one of its ablest representatives in Dr. Umberto Flora, professor of medical pathology in the Istituto di Studi Superiori of Florence. He was but 39 years old when he died but his record as student, as professor, and as consultant was fraught with achievement which would have redounded to the credit of years far more prolonged. Having graduated as Doctor of Medicine at Pisa in 1898 he was at once appointed to a lectureship in the local hospital of Santa Chiara, a post in which he acquitted himself so well that his promotion to others was immediate and uncontested. In 1900 Pisa was ravaged by typhoid fever and Dr. Flora, in conjunction with Professor Silvestrini, directed the local lazzaretto with energy and skill, working many cures and from time to time putting on record the results of his experience, which proved equally opportune and serviceable to his colleagues. In 1901 he became assistant to Professor Studiati in the Pisan chair of physiology, at the same time taking duty in the clinical wards, where he attracted the favourable notice of Professor Grocco, long the recognised head of the Tuscan school. Professor Grocco employed him in disciplining the students in diagnosis and therapeutics and found him so apt and successful a teacher that when called to the clinical chair in Florence he took Dr. Flora with him and in 1902 recommended him to the professorship of "Patologia Speciale Medica," a post he filled with signal acceptance till he died. The semeiology of the nervous system was a branch of research in which he achieved valuable results, embodied in more than one monograph, while his previous publication on "Myasthenic Reaction" continues to be profitable reading to many a worker in that field. A long and brilliant career seemed in store for him when, early last month, he was called to Treviso to attend his uncle, the Cavaliere Bellio, then dangerously ill. His assiduous devotion to the patient proved unavailing and he saw him carried to the grave, only himself to fall a victim to typhoid fever contracted during his service in the sick room. Every care was expended on the promotion of his recovery, his friends and colleagues, Dr. Federici and Dr. Stradiotti, reinforced by his beloved chief, Professor Grocco, taking daily and nightly turns by his bedside. But all in vain. His life of all too enthusiastic and unsparing effort had deteriorated a constitution never very robust and in the evening of Oct. 2nd he passed over "to the majority," lamented by a wide circle of compatriots and scarcely less by British and American colleagues who frequently met him in consultation and never without an enhanced appreciation of his gifts as a physician and as a man.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ivan Neiding, professor of forensic medicine in the University of Moscow.—Dr. Pauchon, a professor in the Marseilles School of Medicine.

VISIT OF FRENCH PHYSICIANS AND SURGEONS TO LONDON, OCTOBER, 1904.

MONDAY, OCT 10TH

ARRIVAL IN LONDON

A REPRESENTATIVE and distinguished company of about 150 French physicians and surgeons from Paris and from various provincial centres in France arrived in London on Oct 9th on a visit to the hospitals and the medical schools of the metropolis The idea of the visit originated with Dr Sillonville and the preliminary steps were, we believe, taken by him The subject was then discussed in Paris and in London and met with such general approval that committees were formed in both these places In Paris the committee included Dr Triboulet (whose efforts to insure success have been indefatigable), Dr Sillonville Dr Apert, and Dr Launay The London committee included amongst its members Sir William Broadbent (chairman) Sir Thomas Barlow, Dr J Dundas Grant (treasurers), Dr Dawson Williams, Dr W J Horne (secretaries), Mr H T Butlin (dean of the Faculty of Medicine of the University of London), and members of the medical staffs of the various London hospitals and other representative men We hope to take a later opportunity of alluding to the strenuous and very successful endeavours of these gentlemen to give our French colleagues a right hearty welcome 24 ladies accompanied the party and amongst them was Madame Pefkine, a lady physician practising in Paris Our visitors arrived at Charing Cross at 5 1 M and were met by Sir William Broadbent and other members of the executive committee At 8 30 on Sunday evening they were received at the Hotel Russell by the executive committee and their names and addresses were registered and every information and facility afforded them concerning the various hospitals or institutions which they specially wished to see A large company was present and the meeting was of a very pleasant nature and undoubtedly a useful and satisfactory preliminary to the subsequent proceedings

VISIT TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE HOSPITALS

On Monday morning, Oct 10th, the French physicians and surgeons repaired in force at the invitation of the President and Council of the Royal College of Surgeons of England to their College in Lincoln's Inn Fields Mr J TWEEDY, the President, standing on the first landing of the staircase in the hall attired in his presidential robes, with Mr A W Mayo Robson and Mr H T Butlin standing by his side, delivered the following address of welcome —

"Messieurs mes Confrères,—Au nom de la solidarité et l'universalité des sciences biologiques et medicales j'ai l'honneur de vous offrir une bonne reception au College des Chirurgiens d'Angleterre Bien que nous parlions les langues differentes nous sommes tous membres de la même famille Nous avons Asklepios pour pere nous sommes également les cohéritiers d'Hippokrates et de Galenos, et nous sommes tous les disciples de Paré et de Bichat, de Harvey et de Hunter, John Hunter, dont le génie se repand dans cette place Welcome gentlemen, to the Royal College of Surgeons of England

M LUCAS CHAMPIONNIÈRE then stepped forward from the

[illegible]

of the Charter by Edward IV in 1461, the incorporation of the College taking place in the year 1800

For the convenience of the visitors the company were then divided into four parties The first was accompanied by Mr Tweedy and the librarian to the council room and library where the historical records and relics were exhibited A second party, under the charge of Mr S G Shattock, the pathological curator, examined the Hunterian Museum Mr O Stewart, conservator of the Museum, conducted another party, and Mr R H Burne showed another group the collection devoted to comparative anatomy

Charing Cross Hospital received a considerable contingent of the French visitors where they were welcomed by representatives of the staff and shown round the wards by Mr Stanley Boyd

LUNCHEON GIVEN BY THE EDITORS OF THE LANCET

At midday on Monday Oct 10th, a luncheon was given by the Editors of THE LANCET to a party of our French medical *confrères*, the luncheon being held at the Imperial Restaurant In the absence of Mr Wakley, the chair was taken by Mr Thomas Wakley, jun, and the following guests were present Dr Lucas Championnière, Dr Triboulet, Dr Hallopeau, Sir William Broadbent, Dr Marie, Sir Dyce Duckworth Profes or Baudry, Dr Theodore Williams Dr Sabrazes Sir Joseph Fayrer, Dr Chauffard Sir Anderson Critchett Professor Poirier, Dr George Ogilvie, Dr Hugo Marcus, Dr Savariaud Dr Dawson Williams, Dr W Jobson Horne Dr Donald W C Hood Dr Boulloche, Dr Blondel, Dr W Ewart, Dr Torgue Dr A S Gubb Dr Huchard, Mr D Arcy Power, Dr Mauclaire, Dr Monprofit, Dr Netter Dr Carnot Dr Fredet Dr Wiart Mr S A Vasey Dr Maunoury, Dr Lacronique, Dr Boyd B Joll, Dr Chassevant Dr Sillonville, Dr Cronzon, Dr H P Cholmeley Dr Langenhagen Dr Teissier, Dr Nogues Dr Soupault Dr Cunéo, Dr Labey, Dr Legry, Dr Brindeau Mr George Pernet Dr Launay, Dr J Dundas Grant Dr Rochon Duvigneaud, Dr Barlet, M Villars, M Mercadier, Dr Apert Mr James Berry, Dr J L Faure, Dr Gaudier and Dr Guelliot

Sir William S Church Dr Herbet, Dr Jacquet, Dr Rénon, and Dr Témoin, who had accepted invitations, were unavoidably prevented from being present

The toasts of 'The King' and of the President of the French Republic, given by the CHAIRMAN, having been honoured,

Dr GEORGE OGILVIE (physician to the French Hospital), in proposing the toast of 'Our Guests,' and speaking in French, made sympathetic reference to the absence of Mr Wakley who was he said the *doyen* of the great medical journal THE LANCET He then read the following letter from Mr Wakley —

"THE LANCET, Oct 10th

age I make it a rule not functions, so I am taking has the honour personally

[illegible] to receive you to day in offering you the heartiest of welcomes and the sincerest of hopes that your visit to London will prove pleasurable For myself I know well that advantage may be derived from the study of medicine in another country seeing that I was for nearly three years, after the completion of my medical training here, occupied in further study in the hospitals of Paris Even now, after the expiry of 60 years, they are still fresh in my mind Gentlemen, may you live many many years, and look back with pleasure to your visit to the hospitals and other medical institutions of London —THOMAS H WAKLEY"

He continued "Our chairman, Mr Wakley, jun, has asked me to say a few words of welcome on his behalf and to express the great pleasure which he feels in meeting you all here The chairman has made this request under the impression that he cannot speak French and because he imagines that I can make myself understood in that language I will do my best and although I may perhaps make some slips I will console myself with the reflection that the man who never makes a mistake will never make anything I thank the chairman for the trust he has reposed in me, though I cannot but believe that someone else would have been able to interpret his thoughts in better chosen words I hope that our guests have had a good passage and that they come to our little village with a good appetite and a good digestion—the latter is an excellent remedy against the English spleen—nay, more, a good digestion is always a proof of a pure conscience I trust that your short stay in London will not be useless and that even if you return home without having greatly increased your medical knowledge you will in any case return to your own country with a firm belief in a lasting friendship between yourselves and your English colleagues May that friendship and may that be one of the good between two great peoples I [illegible] Editors of THE LANCET, health, wish you [illegible] prosperity, and long life"

On the proposition of Sir W. BROADBENT a congratulatory telegram was despatched to Mr. WAKLEY.

M. LUCAS-CHAMPIONNIÈRE, who spoke in French, offered his congratulations to the company on their visit to London—a city which he himself had visited many years ago. He felt sure that the more junior of his colleagues would obtain the greatest pleasure from their first visit to London. He continued: "We have all joined in drinking most heartily the health of the King and I well remember that when I was present at the International Medical Congress held in London in 1881 His Majesty—then Prince of Wales—spoke in terms which we can never forget and the memory of which we still cherish.[1] That, however, was 23 years ago and I see to-day that there have been many changes in London since. In those days I sat as a learner at the feet of Lord Lister and I carried back knowledge with me which has been not only to my own personal advantage but for the advantage of the whole of surgical science throughout France. I thank you, Sir, on behalf of my colleagues for the reception which you have given us and this meeting shows the power of British scientific journalism. With regard to the scientific press we in France are by comparison a small folk, but still, when the opportunity arises we shall certainly do our best."

Professor POIRIER, who spoke next, began by saying that he was the oldest graduate present of the University of Paris. He wished to bear witness to the valuable work which had been done all over the world by the scientific press, and especially in England, and he made a very complimentary reference to THE LANCET, saying that its reputation was as world-wide as the shipping of the country of its birth. "I hope," he continued, "that the work of science may be the means some day of bringing about union of all the people in the world as it is at present in promoting a happy understanding between the countries of England and France."

Dr. TRIBOULET, who followed, expressed the thanks of the visitors to the English Ladies' Committee for their efforts to entertain the ladies of their party and the next speaker,

Dr. MONPROFIT, as representing the provincial medical men of France, remarked that he was the only French surgeon present who was on the staff of a hospital founded by an English King—namely, the Hospital at Angers which was founded and endowed by Henry II., King of England and Duke of Anjou.

Dr. RAOUL BLONDEL, after thanking the Messrs. Wakley and "le grand journal, LE LANCET," for the kind words which they had just heard and their cordial reception, said that he spoke on this occasion as secretary-general of the International Association of the Medical Press. He spoke with all the more confidence because he was well acquainted with THE LANCET and its organisation and its work. It was the father of the medical press of all countries and it had rendered inestimable services to the great cause of public health. He drank to the prosperity of the medical press of Great Britain, especially of THE LANCET and its Joint Editor, their chairman.

The company shortly afterwards separated.

In the afternoon the hospital that attracted most of the visitors was St. Bartholomew's where Sir Dyce Duckworth, Sir William Church, and Sir Thomas Smith attended to accord a warm reception to their French *confrères*. Mr. J. Langton, Dr. Norman Moore, Dr S. West, Dr. J. A. Ormerod, Dr. H. Morley Fletcher, Dr. A. E. Garrod, Mr. W. Bruce Clarke, and Mr. D'Arcy Power conducted the visitors over the hospital.

The Hospital for Sick Children in Great Ormond-street was carefully inspected by many of the medical men from Paris especially engaged in the study of children's diseases. Dr. D. B. Lees, Mr. C. A. Ballance, Mr. W. Arbuthnot Lane, Dr. A. F. Voelcker, and Dr. R. T. Bakewell did the honours of the institution to the party and several interesting operations were witnessed. The Royal Free Hospital (London School of Medicine for Women) was also visited.

In the evening the French physicians and surgeons and the lady visitors were entertained at a pleasant and successful reception given by Dr. and Mrs. Dundas Grant.

TUESDAY, OCT. 11TH.

On Tuesday morning, Oct. 11th, a visit was paid to the French Hospital in Shaftesbury-avenue, where Dr. A. Vintras, Mr. Edmund Owen, Dr. G. Ogilvie, and Dr. H. Dardenne placed themselves at the disposal of the guests and showed them the institution.

A large number of the visitors also repaired to South Kensington to see the laboratories of the University of London. Dr. P. H. Pye-Smith, Sir Arthur Rucker, Dr. A. D. Waller, Dr. F. W. Pavy, Dr. N. H. Alcock, and Dr. W. L. Symes were present to conduct the visitors round the department. The visitors were much interested in hearing from Dr. Waller, who spoke in French, a description of the work carried on in electro-physiology. Dr. Waller also demonstrated an apparatus for the safe administration of chloroform. Two black cats were placed under the influence of chloroform and their speedy recovery to consciousness was noted, and some white rats also served to show how safe the method of giving chloroform was. Dr Waller explained that the appliance was generally known as a Wick vaporiser. Another instrument for the safe administration of chloroform, invented by Dr. Dubois of Paris, was also explained and its use was demonstrated.

St. Mary's Hospital, Paddington, attracted the attention of a fair number of the visitors, where they were received by Sir William Broadbent, Dr. H. A. Caley, Mr. H. E. Juler, and Dr. S. P. Phillips. A particularly interesting demonstration was given by Dr. A. E. Wright who, speaking in French, described his treatment of tuberculosis by therapeutic inoculation of the corresponding bacterial vaccines. He showed a number of cases of tuberculosis in which the disease had been arrested by means of the inoculation, and the French physicians spent a considerable time in investigating the method and its results, being much struck by the favourable effects evidenced in some cases of extreme severity which had been considered incurable after treatment by the usual methods.

St. Mary's Infirmary at Highgate, which is one of the best equipped Poor-law infirmaries in this country, was visited by a few of the French physicians, and the Medical Superintendent, Dr. A. H. Robinson, found that he had to devote a considerable time to explaining the difference between a London hospital supported by voluntary contributions and a Poor-law infirmary, his visitors not desisting from questioning him closely until they had thoroughly mastered the details of the infirmary system of this country.

Queen Charlotte's Lying-in Hospital in Marylebone-road was visited by some members of the French contingent and Dr. W. R. Pollock and Dr. T. W. Eden were well occupied for some time in showing their visitors over the institution, special interest being evinced in the peculiar character of the midwifery training school which is attended by qualified medical men, medical students, midwives, and monthly nurses.

The Medical Graduates' College and Polyclinic in Chenies-street, Tottenham Court-road, being quite close to the headquarters of the visitors at the Hôtel Russell in Russell-square, came in for a large share of attention, and improved the occasion by making the French medical men honorary members of the Polyclinic during their stay in London.

LUNCHEON GIVEN BY MR. BUTLIN, DEAN OF THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LONDON.

Mr. Butlin, Dean of the Faculty of Medicine of the University of London, and Mrs. Butlin entertained the French visitors at a *déjeuner* in the Whitehall Rooms of the Hôtel Métropole, the guests numbering nearly 250. After the toast of "The King" and "The President of the French Republic" had been duly drunk with musical honours, Mr. BUTLIN, who was in the chair, submitted the toast of "Our Guests." Addressing the company in French, he pointed out that the Faculty of Medicine of the University of London was still in its infancy, having been in existence for only four years. The present visit was the first occasion that had offered itself for the opportunity of exchanging international courtesies. Much was said at the present time about universal peace and the methods of attaining such a desirable state of things, but this visit, so happily conceived and so spontaneous in its origin, would do more to promote friendship between England and France than treaties and negotiations. It was science which had brought about this fortunate occurrence because it knew not race, country, or limits. He congratulated the guests on braving the perils of the sea in their passage across the Channel and he applauded their courage in tasting English cooking and listening politely whilst their chairman maltreated the beautiful French language. He concluded by assuring them that

[1] Particulars of this Congress will be found in THE LANCET, August 6th, 1881, p. 245.—ED. L.

though he spoke French badly he drank their health with all his heart. The French visitors accorded the speech of the chairman a peculiar reception, known as a "ban," consisting of clapping the hands rhythmically for a certain number of times and somewhat resembling the method known as "Kentish fire."

M. LUCAS-CHAMPIONNIÈRE, replying in French, said that his present visit pleased him greatly because it was a renewal for a few hours of his youth when he visited England. Englishmen were considered in France as stiff but they had warm hearts. He hoped that they would all profit from their visit.

Professor POIRIER, who also spoke in French, supported the last speaker in expressing the thanks of the guests. He observed that many French medical men had been unable to come to England because of their professional duties and he eulogised the English hospitals and their methods. It was said in France that instruction was gained by travel and Englishmen must have travelled a great deal in order to have learnt so much. In France they were all more or less under the tutelage of the State but here in England individual effort and collective initiative were apparent in all they had seen. He refrained from comparing the French and the English hospital systems but it was quite clear that Republican France might well imitate in many points the noble traditions, the manners, and customs of monarchical England. The former speaker had mentioned that there was a legend in France about Englishmen being stiff but he had failed to find that this was so even after the most careful investigation. He pointed out that their very amiable and sympathetic reception was emphasised by the colours common to the two flags of England and France being mingled together on the very tables at which they were sitting. He sincerely trusted that their collaboration in science would result in an advance which would benefit all by securing general peace, health, and happiness. He concluded by asking those present to accept on behalf of the ladies of their party an appreciation of the courtesies which had been extended to them and he drank to the prosperity of the young and vigorous Faculty of Medicine of the University of London.

The afternoon was spent in visiting various hospitals.

At the Middlesex Hospital Mr. A. G. R. Foulerton was engaged explaining the serum treatment against puerperal fever. Dr. W. S. Lazarus-Barlow took the visitors through the cancer wards and Mr. Hillier's device for studying the development of organisms in microscopic slides was closely investigated. Professor Chassevant showed particular interest in this device and he was promised a full description of all the details of its construction as soon as it was published.

St. Thomas's Hospital received some 30 of the French visitors who were much impressed by the magnificence of the central hall, in which the treasurer, Mr. Wainwright, welcomed them. The wards and operating theatres were shown by Mr. H. H. Clutton, the senior surgeon, Dr. [illegible]ts, Mr. G. H. [illegible]. Tate. The [illegible] the attention of many and high praise was accorded to the new out-patient department.

Guy's Hospital also found itself a centre of interest for a large number of the visitors, who, after being introduced to Mr. Cosmo Bonsor, the treasurer, in the board room, were conducted round the wards in small parties by Dr. F. Taylor and Mr. R. Clement Lucas, Dr. W. Hale White and Mr. O. H. Golding-Bird, Dr. G. Newton Pitt and Mr. W. H. A. Jacobson, Sir [illegible] Symonds, Dr. L. E. Shaw and [illegible] new Finsen light department. [illegible] apparatus under the care of Mr. G. Sichel gained much commendation.

[illegible] visited by some of the visitors [illegible] and rhinology who found Mr. [illegible] on duty at work in the wards. [illegible] the visitors round and explained the points of interest in the institution.

The London Hospital was shown to the visito[illegible] Eve, Mr. J. A. Mansell Moullin, Mr. J. Sherren [illegible] of the staff. The out-patients' department, the [illegible] department, and the massage rooms seemed to [illegible] of the time of the visitors and the enormou[illegible] patients and the practical manner of dealing with them greatly pleased those French surgeons and physicians who were accustomed to the Paris hospitals.

The Lister Institute of Preventive Medicine in Chelsea-gardens was visited and closely studied and the laboratories of bacteriological and chemical research work afforded many objects of importance for the consideration of the French visitors.

The Chelsea Hospital for Women was inspected by a small section of French medical men who were cordially welcomed by the hospital staff and shown round the institution. The new sterilising room was much admired and the very complete and modern appliances and arrangements in connexion with the operation theatre furnished so much of importance to discuss and to see that the visitors did not leave for some considerable time.

At Westminster Hospital many of the French surgeons gathered together to witness some operations performed by Mr. C. Stonham. Dr. W. H. Allchin and Dr. W. Murrell conducted some of their French medical brethren round the hospital and explained various matters of professional interest.

At St. Mark's Hospital for Fistula and other Diseases of the Rectum in the City-road a section of the visitors attended to see Mr. F. C. Wallis perform his modification of Whitehead's well-known operation. Some of the French surgeons present evinced great curiosity concerning the up-to-date operative equipment of this hospital and Mr. Wallis explained the special nature of the institution and its foundation.

St. George's Hospital was visited by most of the French party and the excellent appointments of this renowned school of medicine and surgery were greatly admired.

WEDNESDAY, OCT. 12TH.

On Wednesday, by command of the King, an intimation was conveyed to the French visitors that His Majesty had graciously given his permission for them to see the King Edward VII. Hospital for Sick and Wounded Officers which was founded by Miss Keyser (Sister Agnes) in Grosvenor-gardens. Miss Keyser has nursed the cases there with a staff of five nurses and the French visitors praised the home-like surroundings of the institution, which, nevertheless, lost nothing in utility by the comforts of the wounded officers receiving more attention than it is usually possible to supply in a hospital.

The laboratories of the Imperial Cancer Research Fund, situated at the Examination Hall on the Victoria Embankment, were visited by many of the French physicians and surgeons, amongst them being Dr. R. Simon, Dr. Gaston, Professor Legry, Professor Reynier, Professor Netter, Dr. Hugo Marcus, Dr. Garnier, and Dr. Triboulet. The party were received by the director of the Central Laboratory, Dr. E. F. Bashford, and Dr. Murray who were assisted by Dr. Lavaditi. Dr. Bashford explained that the object of the institution was to place the investigation of cancer upon a uniform scientific basis throughout the British Empire and in this manner to utilise the opportunities afforded by India, the colonies, and the various protectorates for ascertaining the nature of the incidence of cancer in different native races and in widely separated geographical areas. In this research work especial weight was attached to the study of cancer in the lower animals, domesticated and wild, and a farm for the accommodation of larger animals was maintained. The details of all cases of cancer occurring in the great London hospitals were tabulated uniformly and, in addition to statistical work, the investigations consisted of experimental and histological work on the nature and processes of growth and on the diagnosis and treatment of cancer. These studies were carried out by a scientific staff representative of the biological, pathological, chemical, and statistical aspects of the work. The [illegible] specimens of [illegible] in fish and mice [illegible]

Dr. F. W. Mott at Claybury Asylum had a busy day showing a group of interested French visitors the patho[illegible] [illegible]ty asylums. A [illegible] chairman of the [illegible] in the nurses' [illegible]e medical super[illegible]

[illegible] Inn-road, with its special associations with the [illegible] [illegible]dical women, was

visited by many of the guests who were struck by the principle followed at that institution of free admission of sick people, no letters of recommendation being issued.

Amongst the other hospitals and institutions visited were the Samaritan Free Hospital, the Victoria Hospital for Children, the Royal London Ophthalmic Hospital, the Hospital for Consumption, Brompton, the Alexandra Hospital for Children with Hip Disease, the West London Hospital and Post-Graduate College, University College Hospital, and the Royal Societies Club.

BANQUET TO FRENCH PHYSICIANS AND SURGEONS BY THEIR ENGLISH COLLEAGUES.

The banquet given to the French physicians and surgeons by the London executive committee took place on Wednesday night, Oct. 12th, at the Hotel Cecil, London, Sir W. Broadbent being in the chair. On the right of the chairman were seated: La Premier Secrétaire, Ambassade de France, the Duke of Abercorn, K.G., Professor Poirier, the President of the Royal College of Surgeons, Dr. Triboulet, Sir Douglas Powell, Dr. Alan Herbert, Mr. J. Hutchinson, Dr. Pavy, Dr. Sabrazès, the Vice-Chancellor of the University of London, Dr, Lacronique, Sir Anderson Critchett, Dr. Maunoury, Mr. Edmund Owen, Professor Cunéo, Professor Fabre, Dr. Theodore Williams, Dr. Jousset, Mr. Makins, Dr. Palle, Dr. Dutil, Dr. Hermann, Dr. Ducamp, Mr. Golding-Bird, Dr. Hervé, Dr. Caley, Dr. Presch, Dr. Cheadle, Dr. Dransart, Dr. Crocker, Dr. Hallopeau, Dr. Pringle, Dr. Jacquet, Dr. Buzzard, Professor Marie, Professor Ferrier, and Dr. Hale White. To the left of the chairman were seated: M. Lucas-Championnière, the President of the Royal College of Physicians, Professor Chauffard, Sir Dyce-Duckworth, Dr. Huchard, Sir Joseph Fayrer, Professor Baudry, Professor Howard Marsh, Professor Lepage, the Dean of the Faculty of Medicine of the University of London, Professor Chambrelent, Dr. Frederick Roberts, Professor Carnot, the Principal of London University, Professor Teissier, Sir William Bennett, Dr. Felizet, Mr. Horniman, Professor Mauclaire. Mr. Watson Cheyne, Sir Thomas Smith, Sir Patrick Manson, Dr. Adler, Dr. P. Abercrombie, Dr. Apert, Dr. Anderson, Dr. Barrabe, Dr. Baker, Dr. Barrié, Mr. Barker, Mr. Barnard, Dr. Béchet, Dr. Bashford, Dr. Bensaude, Dr. Bastian, Dr. Birand, Mr. Battle, and amongst others present were Dr. Faure, Dr. Mitchell Bruce, Dr. Delamerre, Mr. Godlee, Dr. Girou, Dr. Guillaume-Louis, Mr. Mayo Robson, Dr. Sharkey, Dr. Angibaud, Mr. Walter Spencer, Mr. Symonds, Dr. Rénon, Dr. Ewart, Dr. Savage, Dr. Schmitz, Dr. Lequeux, Dr. Frederick Taylor, Mr. Wallace, Dr. Dufournier, Dr. Goodhart, Dr. Dupius, Dr. Témoin, Dr. Risien Russell, Dr. Wiart, M. Reynier, Dr. Cazes, Mr. Herbert Page, Dr. Monprofit, Dr. Newton Pitt, Dr. Renaud, Dr. Villaret, Dr. Saint-Cène, Dr. Dundas Grant, Dr. Horrocks, Dr. Mergnat, Mr. Keetley, Dr. Le Martin, Dr. Percy Kidd, Mr. A. W. Lane, Mr. Lockwood, Dr. Nitot, Mr. Lucas, Dr. Luff, Mr. Herbert Spencer, Dr. Chassevant, Dr. Boyd Joll, Dr. Grinda, Dr. Penrose, Dr. Dineur, Dr. Dupane, Dr. Juyot, Dr. Pierre, Dr. Guyot, Dr. Noguès, Dr. Boulloche, Dr. Sillonville, Dr. Langerhangen, Dr. Herringham, Dr. Edouard Janicot, Dr. Janicot, Dr. Monard, Mr. Stephen Paget, Dr. Netter, Dr. Pamart, Dr. Pautrier, Mr. Kiallmark, Dr. Michon, Dr. Dawson Williams, Dr. Pochon, Dr. Poix, Mr. Langton, Dr. Rabat, M. Huguenet, Dr. Raulin, Dr. Tate, Dr. Robert-Simon, Dr. Rochon-Duvigneau, Dr. Murrell, Dr. Scherb, M. Pondepeyre, Dr. Cazels, Dr. Legry, Dr. Surre, Mr. F. C. Wallis, Dr. Hugo Marcus, Dr. Antonelli, Dr. George Ogilvie, Dr. Simon-Clement, Dr. Surmont, Dr. Soupault, Dr. Fredal, Dr. Lardennois, Dr. Garrod, Dr. Gastou, Dr. Lemaire, Mr. Marcus Gunn, Professor Waller, Mr. T. Wakley, jun., Dr. Magdelaine, Dr. Malherb, Dr. Schlemmer, Dr. Mondot, Dr. Savariaud, Dr. Barlet, Dr. West, Dr. Tallaye, Dr. Mott, Dr. Tissier-Guy, Dr. James Taylor, Dr. Fixier, Dr. Jarvis, Dr. Madeuf, Mr. Jessop, Dr. Lutard, Dr. Jakins, Dr. Lièvre, Mr. J. Hutchinson, jun., Dr. Letoux, Dr. R. Hutchison, Dr. Léri, Dr. Le Clerc, Dr. Launay, Dr. Habershon, Dr. Gubb, Dr. Jobson Horne, Dr. Herard de Bessé, Dr. Jeannel, Dr. James Galloway, Dr. Leonard Williams, M. Bouteron, Dr. Galabin, Dr. Labey, Dr. Lartet, Dr. Laporte, Mr. Eve, Dr. Guisez, Dr. Gugliemetti, Dr. Guelliot, Dr. Gaudier, Mr. Eastes, Dr. Garnier, Dr. Estrabaud, Dr. Esmonet, Dr. Carra, Dr. Donald Hood, Mr. Stanley Boyd, Dr. Crouzet, Dr. Thiéry, Dr. Touchard, Dr. Vaudremer, Dr. Ormerod, Dr. Walther, Mr. de Batz, Dr. Boeteau, Dr. Legros, Dr. Louis Vintras, Dr. Debout d'Estrees, Dr. Courtade, Dr. Choppin, Dr. Cayla, Dr. Casse, Dr. Briand, Dr. Tirard, Mr. Bidwell, Dr. Bossan, Dr. Bobrie (fils), Dr. Bobrie, Dr. C. Beevor, Dr. Blondel, and Mr. D'Arcy Power.

At the end of the dinner the CHAIRMAN proposed "The King" as follows:—Messieurs mes confrères français et anglais,—Mon premier devoir est de vous prier de boire à la santé du Roi, mon maitre. Il serait bien assez de dire tout simplement "Le Roi," comme l'a fait mes collègues, M. Butlin hier et M. Wakley avant-hier; ce serait même la manière la plus effective de presenter ce toast, mais je demande la permission d'ajouter quelques paroles. Nous avons bien le droit d'être fiers de notre Roi; comme Prince de Galles il s'est fait une haute idée de ses devoirs envers la nation et il s'est dévoué à son service, mais il a fallu le champs d'action plus large, la haute position du trone, pour montrer a la vue du monde entier les qualités d'un grand homme d'état, pour developper ses idées vraiment royales et pour exercer les vertus mâles et positifs du monarque. Vous ne savez probablement pas que sa Majesté est médecin et chirurgien. Je ne dis pas qu'il exerce, mais il a fait l'honneur aux deux collèges de médecine et de chirurgie d'accepter les titres de Honorary Fellow of the Royal College of Physicians et de Honorary Fellow of the Royal College of Surgeons, et il prend ses devoirs très à cœur, s'occupe de tout ce qui appartient aux sciences médicales et à la santé publique. Sa Majesté est patron et a été le Président de l'Association Nationale contre la tuberculose, le patron aussi du Cancer Research. De plus il prête son influence puissante et une assistance materielle très importante aux hôpitaux de Londres. Il a eu la grande et belle idée d'instituter le King Edward VII. Hospital Fund qui leur distribue £50,000 par an. Il n'est pas nécessaire de vous dire combien notre Roi aime la France; c'est entendu de tout le monde. Sa Majesté connait bien son Paris, et s'est souvent promené incognito sur les boulevards, souvent aussi il a assisté aux courses des yachts sur le littoral de la Méditerranée. Il a témoigné son intérêt dans votre visite par le telegramme que j'ai eu l'honneur de recevoir.

Here the CHAIRMAN read the following telegram from Lord Knollys: "I am commanded by the King to inform you that he has noticed with great satisfaction that so large a number of French medical professors, physicians, and surgeons have come to England to inspect the hospitals in London. His Majesty has always taken a warm interest in these institutions. He has observed therefore with much gratification the success which has attended the visit of these gentlemen and he hopes that mutual benefit to both countries will ensue from it. The King remembers with great pleasure that on the occasion of the International Medical Congress in London he had an opportunity of making the acquaintance of their distinguished countryman, the late M. Pasteur."

This telegram was greeted with loud and prolonged acclamation, the following reply being sent: "Au nom des médecins Français venus à Londres le Professeur Lucas-Championnière, President, et les Professeurs Huchard, Poirier, et Chauffard de la Faculté de Médecine de Paris, prient sa Majesté d'agréer l'expression de leurs sentiments les plus respectueux et la remercient de son gracieux message."

[Resuming his speech the CHAIRMAN continued:]

Mais sa Majesté a des droits encore plus sérieux et plus élevés à notre admiration et à notre révérence. Il y'avait un moment où de sombres nuages se sont montrés dans l'est; il était à craindre que les sentiments des deux nations ne suiverent nos alliances opposées; alors le Roi a fait sa memorable visite à Paris; il s'est fait le paratonnerre de l'Europe, l'orage a été conjuré. Le Roi a déjà gravé son nom sur la page de l'histoire, Edward VII. the Peace Maker. Mais si vous voulez bien regarder les livres sterling que vous portez tous dans vos poches—dont j'espère que vous avez même plusieurs quoiqu'ils coûtent 25 francs et quelque sous—vous verrez cette légende Edwardus Septimus Dei Gratia Omnium Britanniarum Rex, Indiae Imperator. Vous pouvez donc républicains convaincus crier ici, Vive l'empereur. En tout cas je vous engage de boire de tout votre cœur à la santé du roi.

After the toast had been duly honoured the Chairman added: Je veux ajouter un petit post-scriptum au toast que vous venez de célébrer. A la Santé de la Reine—toujours jeune, toujours très jeune—toujours belle, toujours très belle—toujours gracieuse, toujours très gracieuse. A la Santé du Prince de Galles et de la Princesse de Galles, à la Santé de Toute la Famille Royale.

The CHAIRMAN again rose and proposed "The President

of the French Republic" in the following terms: Gentlemen,—We have just drunk with enthusiasm the health of the King and of the Royal Family; I have now the honour to propose a toast which I am sure you will receive with corresponding enthusiasm, the health of the President de la République Française. Every seven years France chooses from among her citizens a man whom she delights to honour, one who has served her well, for whom she has the highest respect and from whom she expects the greatest service, and places him at the head of the State, makes him President of the French Republic. From that moment he represents the might and majesty of France and takes his place with emperors and kings. This high position is at present held by M. Loubet and we have seen with what dignity he has upheld the honour of France at St. Petersburg, at home, and in London. No royal visit ever commanded greater interest than that of President Loubet to London, and whether in royal palaces or as a simple citizen driving his modest phaeton in the Champs Élysées he commands our admiration. Gentlemen, the health of M. Loubet, President de la République Française.

This toast was acknowledged by M. DAESCHNER, first secretary of the French Embassy, who thanked Sir William Broadbent for the terms in which he had proposed the health of the President and for the cordial manner in which he himself had been alluded to. The President would add this to the souvenirs he had taken back with him of the cordiality which had characterised his recent visit to London. He had been requested by the Ambassador to express his regret at having been prevented from assisting at this fête and he had asked him to express the interest that he took in an undertaking which brought together the medical profession of the two countries.

The CHAIRMAN concluded by bidding the guests *au revoir* in the following words:—Mes collègues et confrères français,—Au nom des convives autour de ces tables—au nom des médecins et [illegible] nom du monde médical [illegible] come." Vous avez déjà [illegible] je suis sur, que vous en avez senti la signification et la realité depuis lundi matin quand le Président et le Conseil du Royal College de Chirurgiens se sont réunis pour vous recevoir, jusqu'à ce soir où nous devons nous dire adieu. Ce n'est pas le moment de peser les résultats de la visite amicale que vous nous avez fait l'honneur de nous faire. Il en est un qui est certain—c'est de serrer encore plus étroitement les liens intellectuels de respect et d'admiration mutuels qui nous unissent déjà et d'en ajouter un autre, un [illegible] l'amitié. C'est une vraie fraternité qui existe entre nous—nous sommes de la même famille scientifique; continuons de chercher et poursuivre donc ensemble la vérité, de nous rivaliser dans nos efforts pour avancer la science, et surtout de travailler pour le soulagement de nos frères souffrants. Au revoir.

Dr. GEORGE OGILVIE proposed the toast of "Our Guests" as follows:—

Monsieur le Président et Messieurs,—Il faut que je remercie d'avance mes collègues anglais de l'honneur qu'ils m'ont fait de me charger de l'organisation du banquet, et de porter le toast à nos invités. Messieurs, vous avez dû remarquer que le menu présente un choix exclusif de mets anglais, que nous avons abondamment arrosés de vins français, pour les rendre moins lourds. Et vous avez vu, sans doute, que j'y ai mis en bonne place, le fameux jambon d'York, mais le comité a pensé qu'il fallait y ajouter un large morceau de langue—écossaise. Pour cette raison ils ont fait choix de ma petite personne. En plus, mon titre d'Ecossais vous rappelera certainement les liens antiques qui rattachaient l'Ecosse à la France. Ces liens faisaient présager ceux qui existent heureusement à cette heure entre votre pays, Messieurs, et le nôtre. Messieurs, vous avez quitté la belle France et la ville lumière, le pays de Molière, de Laplace, et de Pasteur. Et vous voici dans notre petite île, la ville aux brouillards, mais le pays de Shakespeare, de Newton, et de Jenner. Vous pensiez peut-être trouver ici de froids anglais. Vous avez été désappointés j'espère, et vous avez vu dans notre réception tout notre désir de vous témoigner notre cordialité, et notre bonne camaraderie. Car nous sommes tous médecins—non des morticoles, dont on a dit "leur seule fin est de constater"—mais nous puisons dans notre cœur des sentiments humains pour ceux qui souffrent, car nous savons si c'est la curiosité des maladies qui fait le savant, c'est l'amour des malades qui fait le médecin. J'espère donc que votre venue parmi nous ne vous aura pas été inutile, que vous aurez tiré quelque profit de votre visite à nos musées, nos hôpitaux, et nos laboratoires, et que vous n'êtes pas encore en proie à une nostalgie à l'état aigu. On a dit souvent qu'il n'y à point de frontières pour la science. Quand deux pays comme la France et l'Angleterre sont liés par une entente cordiale, l'union est encore plus complète entre ceux qui, comme nous, travaillent pour le soulagement de leurs semblables, et à l'extension progressive de leur pouvoir scientifique. Messieurs, je regrette de ne pouvoir porter le toast avec la verve gauloise du Professeur Poirier, mais j'ai tâché le faire avec cette fougue impétueuse qu'on appelle chez nous *ingenium perfervidum Scotorum*, et je lève mon verre à l'union entière des médecins français et des médecins anglais, qu'ils continuent à marcher la main dans la main, n'ayant qu'un seul but, la grande cause de l'humanité.

This toast was replied to by M. LUCAS-CHAMPIONNIÈRE, who said that after so many brilliant receptions he found it dificult to find terms that would adequately convey their thanks. He had already had occasion to appreciate the King's interest in medical matters at the Congress of 1881. He recalled the fact that as a young surgeon he had been hospitably received by Mr. (now Lord) Lister, at Edinburgh. He was accustomed to say that Lister did not improve surgery but had created it and this was the simple truth. He thought the two countries were destined to become perfectly united not only politically but scientifically, a union that was based on their differences. He concluded his remarks by a few words in English hoping that his fellow visitors would carry back to France as favourable an impression of the English people as that which he himself had formed in the days of his youth. He expressed on behalf of them all their heartiest thanks coupled with the hope of future meetings not only at Paris but elsewhere.

This toast was also responded to by M. HUCHARD, in the [illegible] de Londres et de l'Angleterre, dont il personnifie si hautement la science et l'honneur, que j'apporte le salut reconnaissant et amical des praticiens français. Je dis "praticiens," parce que je ne désire être le porte-paroles, ni d'une université, ni d'une académie, ni du corps médical des hôpitaux, mais des médecins de notre pays. Ils ont tous un titre égal à vos yeux comme aux nôtres, puisque tous ils aiment avec la même sincerité, avec les mêmes vibrations du cœur, nos chers confrères anglais. Nous sommes venus ici les mains tendus vers vous, parce que nous aussi, nous avons voulu, par notre présence, consacrer en quelque sorte cette entente cordiale dont la nouvelle a été partout accueillie avec bonheur et avec reconnaissance; avec une infinie et une très respectueuse reconnaissance pour votre auguste Souverain dont la parole royale vient d'être entendue avec tant de recueillement, dont le nom sera grand dans l'histoire parce qu'il aura aimé les fécondes et calmes conquêtes de la paix! Nous nous réjouissons du mémorable évènement qui rapproche en même temps les médecins de deux pays. Nous n'ignorons pas qu'il y a de par le monde des alliés qui ne s'entendent pas toujours d'une façon absolument cordiale, tandis que ceux qui commencent par s'entendre sur tout ce qui peut les diviser, sont forcément plus et mieux que des alliés: des amis. Et, entre médecins, cette amitié procède souvent d'abord d'une certaine communauté de travaux, comme le démontre [illegible] de vous rappeler, mor[illegible] pour vous rendre la [illegible] reusement à vous-même. Il y a quelques semaines sans avoir eu l'honneur d'être personnellement connu de vous, vous av[illegible] id[illegible] la [illegible] unie a trop de [illegible] erreur: c'est nous qui partageons vos idées, et il y a plus de vingt années, alors que nous commencions nos recherches à ce sujet, vous nous aviez déjà révélé quelques-uns des dangers de cette hypertension. Et c'est ainsi que, comme M. Jourdain faisait autrefois de la prose sans le savoir, nous avons fait ensemble de la bonne et scientifique diplomatie sans nous en douter, puisque l'entente cardiaque

entre nous a de longtemps précédé l'entente cordiale. Peut-en être autrement, et la science n'est elle pas la grande diplomate qui unit les peuples au lieu de les separér, comme le rappelait encore hier votre vénéré doyen, M. Butlin, avec la belle simplicité d'une éloquence inspirée par son cœur: La science est la force, parce qu'elle est la douceur; elle est, elle doit être, la messagère de la paix parce qu'elle veut adoucir et constamment épargner les vies humaines, et les frontières des nations s'aplanissent sur son large horizon, toujours infini; de sorte qu'une seule chose, que la houle rend parfois un peu amère, nous sépare maintenant: le Pas de Calais, à moins qu'un jour une communication plus facile et plus clémente pour certains estomacs parvienne à nous réunir plus complètement encore. Alors, à ce moment comme autrefois un de nos rois s'ecriait: "Il n'y a plus de Pyrénées" nous pourrons dire à notre tour: Il n'y a plus de Pas de Calais, ni de ligue contre le mal de mer. Mais, je m'arrête, ayant déjà dépassé le limite de la brièveté qui est "l'âme de l'esprit" comme un de vos proverbes le dit si bien. Brevity is the soul of wit. Laissez-moi, gentlemen, terminer par un souvenir qui ne peut vous être désagréable, et par une espérance qui remplit nos cœurs d'allégresse. Il y a quelques années—c'etait vers l'an 1066, si je me rappelle bien—il parait qu'avec Guillaume de Normandie nous vous avons un peu conquis, ce qui prouve que les ancêtres de nos familles datent d'assez loin. Et voilà que, depuis longtemps déjà qu'aujourdhui surtout, par une véritable et délicate pensée de réciprocité, vous nous avez tous conquis à notre tour, de la façon la plus aimable, de la façon la plus charmante. La première conquête est perennisée depuis près de 900 ans, que la seconde conquête ait une égale durée! C'est notre vœu le plus cher, notre plus ardent souhait; c'est là notre ferme espérance!

Dr. P. H. PYE-SMITH, the Vice-Chancellor of the University of London, who spoke in French, said: I have the honour to propose the toast of "The Faculty of Medicine of Paris," an ancient and illustrious body that has always stood foremost in our commonwealth and is to-day as vigorous as ever. It recalls the names of Ambroise Paré, of Pecquet, of Astruc, Réaumur, Bichat, Laennec (with his happy citation of the dictum of Hippocrates, *Pouvoir explorer est à mon avis une grande partie de l'art*), Andral, Cruveilhier (*Virgilium vidi tantum*), and those whom I had the privilege to learn from—Velpeau and Bouillaud, Claude Bernard, Trousseau, Hardy, and Charcot. I speak of those only who are no longer with us, but around these tables we see ample proof that the great traditions of the Faculty of Paris are worthily upheld by those who carry on the torch of science to enlighten and of sympathy to warm.

Et quasi cursores vitai lampada tradunt.

But it is not only as comrades, to whom we open freely, as they always do to us, whatever improvements we make—for there are no secrets in our honourable profession—it is also as representatives of the noble nation of the French that we greet our visitors. "France, our sweet enemy," was Sidney's harshest term; and, in the frequent wars which taught each nation to view the other "with the stern joy that warriors feel in foemen worthy of their steel," there were numberless instances, from Poictiers to Fontenoy, of this mutual respect. Let me recall only two. On the bloody field of Salamanca two squadrons met and a French trooper raised his sabre to cut down an English officer, but seeing that he had already lost an arm the gallant Frenchman lowered his sword to the salute and passed on to find a less defenceless foe. At the Guildhall banquet which celebrated the coronation of our late beloved Queen Victoria, it was the Duke of Wellington who proposed the health of the Ambassador of France, his redoubtable adversary on many a contested field but then his honoured guest at Apsley House, Marshal Soult. May I adapt these lines from Béranger?

"J'ai vu la Paix descendre sur la terre,
Semant de l'or, des fleurs et des épis;
Ah, disait-elle, egaux par la vaillance,
Français, Anglais, Russe, ou Germain,
Peuples formez une sainte alliance,
Et donnez vous la main!"

This meeting will, I am persuaded, foster the good understanding now so happily established between the two nations; for to know Frenchmen better is to esteem them more highly and to converse with French ladies is a liberal education. You know the charade: "Mon premier est le premier de son espèce, *mon second n'a pas de second, mon tout*—je ne puis pas vous le dire."—Messieurs et confrères, I will not say Adieu, I will say, Au revoir.

This toast was acknowledged by Professor POIRIER who [illegible] approaching he wished frankly to draw the balance-sheet of their excursion. He as [illegible] they had seen so much [illegible] so much that was instructive, that [illegible] must remain in the immensity of this [illegible] interesting, more instructive still, which it would be to their advantage to see. The time had been so short, the three days had passed like lightning. Really it was too short. It remained for him to express their admiration for the various institutions they had visited, to enumerate which alone would require too much time. He might, however, mention one or two of the things that had struck them more particularly—namely, the practical character of the institutions and the magnificent results of individual and collective initiative allied with the profound respect of the English people for religion and tradition. The sight of the wards embellished with flowers and the charming figures of the graceful nurses impressed them profoundly. It was impossible to do justice to the friendly character of the reception for the French language lacked adjectives adequate to the occasion. They could not hope to receive their English friends in a manner at all comparable to the present but they would do their best. Though these sentiments had to pass from the lips they came from the heart, not from the pericardium but from its most intimate structure. He had to finish by a toast, [illegible] whether this was favourable to the em[illegible] sh dishes and French wines, but he would ask them to join him in drinking to the fertility of the union which united them against barbarism, ignorance, intellectual and physical poverty, and to the progress of humanity.

This toast was also replied to by Professor CHAUFFARD who said that, speaking on behalf of the professeurs agrégés de la Faculté de Paris, he begged to tender their deep gratitude for the magnificent reception. Their brief sojourn here would leave a permanent impression. There was but one medical science common to them all but medical and surgical practice differed, each people understanding and applying it in its own manner. The English were essentially a practical people who sought and who found the simplest means of attaining the object in view. This was everywhere visible in their hospitals. The Englishman carried everywhere his love for home life and their hospital patients seemed to be members of a family. They were considered not as pathological cases but as unfortunate brethren and as if it were their duty first to care for and then to love them. Their wards were a pleasant sight—so clean, so homely, beautified by flowers and the smiles of the charming nurses. He concluded by inviting them to drink the health of the chairman of the executive committee, of Dr. Ogilvie, and of the many distinguished physicians and surgeons who had organised the fête, and also the progress and greatness of the Faculty of Medicine of the University of London.

The health of the chairman was proposed by Dr. TRIBOULET who said that the idea of this excursion originated with Dr. Sillonville and fell on a soil admirably prepared to enable it to develop into this remarkable reunion. These meetings would do more to unite the two peoples than all the efforts of engineers to do away with the English Channel. He concluded by a few words in English in which he asked them to drink to the English executive committee, also to the English ladies, to whom he tendered the assurance of "ces sentiments très plus profond."

The CHAIRMAN briefly acknowledged the toast and then the company separated.

During the course of the banquet a congratulatory telegram was received from the members of the Continental Anglo-American Medical Society, assembled at their annual meeting in Paris.

THE LADY VISITORS.

The reception and entertainment of the lady visitors were under the supervision of a committee of English ladies who were indefatigable in their efforts to secure the well-being and happiness of their guests.

ST. PETERSBURG SOCIETY OF MEDICAL MEN.—This society, says the *Novoe Vremya*, entered on its seventy-second year of existence last month and its annual meeting was held on Sept. 29th. It was chiefly taken up with reports by members of the doings of the society during the past 71 years.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination the following candidates passed in the subjects indicated —

PART II

Anatomy—L. W. Bradshaw, Leeds A. C Dickson, Guy's Hospital, R. Kezet, Edinburgh, London Hospital
P I W Bradshaw and T P Hospital, W P Pinder
Leeds, H. N Ritchie, Sheffield, and N. C Wallis, London Hospital

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS—The following candidates have passed the preliminary examination —

Miss Harriet J Gibbons * J M
Gage * N Pu Heffernan, B Hill,
H Hunt, W Sweeney, W R
O Keeffe, W K Sewer H B
Smyth, P T

FOREIGN UNIVERSITY INTELLIGENCE—*Basle* Dr Ernst Wölfflin has been recognised as *privat docent* of Ophthalmology, Dr Wilhelm Falta as *privat docent* of Internal Medicine, and Dr Surgius Soltykoff as *privat-docent* of Pathological Anatomy and General Pathology Dr. Eugen Enderlen of Marburg has been appointed to the chair of Surgery in succession to Dr Hildebrand who goes to Berlin—*Berlin* Dr Bremer, *privat docent* of Otology, and Dr S Levy, *privat-docent* of Pediatry, have been granted the title of Professor—*Cornell (New York)* Dr Adolf Meyer has been appointed to the chair of Psychiatry in succession to Dr A M L Hamilton, resigned—*Leipzig* Dr. Eugen Fischer, moted to an Extrao Ernst Schultze of Professor of Psychiatry—*Lausanne*. Dr Galli-Valerio Extraordinary Pr noted to an Ordinary ishy, Extraordinary Pro vich, Extraordinary Pro have Dr or of Ophthalmology, orship Dr Friedrich ogical Anatomy, and ... the History of Medicine, have been promoted to Extraordinary Professorships Dr. G Jovannovics has been recognised as *privat docent* of General and Experimental Pathology

SOUTH-WEST LONDON MEDICAL SOCIETY—The annual dinner of this society was held at the Café Monico, Piccadilly circus, London, W, on Oct 7th, when about 50 members and guests were present The chair was taken by Mr E F White, the President The loyal toasts having been duly honoured, the toast of "The Society" was proposed by Dr W H Allchin and responded to by the President Surgeon-Major Mark Robinson proposed "Our Kindred Societies and Visitors," to which Sir R Douglas Powell and Mr F T Burghard replied The toasts were interspersed with musical and humorous recitals and exhibitions of sleight of hand and a very agreeable evening was spent

LIMITATIONS TO THE USE OF AGAR-AGAR AND GELATIN IN RUSSIA—The admission of agar agar into preserves has been the subject of considerable discussion amongst certain Russian authorities It was raised by the Minister of Agriculture who thought that the use of this foreign substance would interfere with the consumption of home grown fruits The members of the Ministerial committee found it necessary to forbid the use of agar agar in the preparation of jams and to increase the import duty on it Owing to its cheapness and the various and extensive uses to which it is put a special committee of the Technical Society was appointed to clear up the question as to its being harmful or not This committee concluded that agar-agar did not affect fruit so much as gelatin in that being non azotic it was not liable to prejudicial fermentation, as is the case with gelatin. The members of the committee of the Ministry of Agriculture, however, did not share this view, says the *Novoe Vremya*, and held to their original finding, but supplemented it thus. "In the preparation of jams neither foreign agar agar nor home made gelatin may be used"

PRESENTATION TO A MEDICAL PRACTITIONER—At the presentation of the certificates to the successful members of the St John Ambulance Railway Class at Chipping Sodbury (Gloucestershire) on Oct. 5th, Mr Alfred Henry Grace, L S A Lond, was presented with a hunting crop as a mark of appreciation of his services as honorary lecturer

VACCINATION IN PLYMOUTH—At the meeting of the Plymouth board of guardians held on Oct 4th the sub-committee recommended that as 855 out of 939 cases of vaccination took place at the houses of the persons vaccinated during the year ended June last the public vaccinator should be requested, as far as possible, to ask parents to take their children to his surgery for the purpose After some discussion the report was adopted

UNIVERSITY OF GLASGOW—It is announced that Dr W R Smith, professor of forensic medicine and director of laboratories of state medicine in King's College, London, has been adopted by the Conservative and Liberal Unionist Association of the Universities of Glasgow and Aberdeen as their Parliamentary candidate in succession to Mr J A. Campbell, the present representative, who will retire at the next election

UNIVERSITY OF OXFORD—The following members of the University have been elected to entrance scholarships at London medical schools: E P Cumberbatch, B A, Keble College to a senior scholarship in science at St Bartholomew's Hospital, E. L Kennaway, B A, New College, to the University scholarship at the Middlesex Hospital; and C Beards, B A, Jesus College, to a Universities scholarship at Charing Cross Hospital

UNIVERSITY OF CAMBRIDGE.—An important proposal has been made by the Council of the Senate providing for the mutual recognition by the Universities of Cambridge, Oxford and London of their several entrance examinations—Previous, Responsions, Matriculation, Senior Local, &c—Mr J J Lister, F R S, St John's, has been appointed demonstrator of comparative anatomy—At Trinity College Mr K Lucas and Mr N R Campbell, who graduated with first class honours in natural science, have been elected Fellows

A NEW ST PETERSBURG ASYLUM FOR THE INSANE—On the initiative of Dr. A G Konosevitch a handsome asylum for the insane has been erected at his expense in the Pesotchni Ulitz. The *Novosti*, commenting on the event, makes disparaging reference to such public accommodation for this purpose as exists, saying it is cramped and tends only to make the inmates' cases hopeless of cure In the Konosevitch Institute every appearance of the ends to which it is devoted is, so far as possible, suppressed The windows are not iron barred and each patient has a separate light room, decorated in modern style There is nothing of the barracks about the place Reading rooms billiards, and so on are provided Violent patients are effectually isolated so that their cries are not heard by the other patients The asylum consists of two buildings for male and female inmates respectively and they are separated by a large garden. It cost £40,000

LITERARY INTELLIGENCE—Mr Edward Stanford will publish on Oct 15th "Stanford's Geological Atlas of Great Britain" The book is based upon Reynolds's Geological Atlas, the second edition of which was issued in 1889 While the general plan of the older work has been followed the text has been amplified by Mr Horace B has also edited the maps o a large extent on those of now been revised from the later maps published by the same authority The descriptions of the geological formations, with lists of localities for fossils, have been extended and notes on the geological features of seaside resorts and of the scenery observable along the main lines of railways have been appended The text contains 17 sections and views and the atlas now comprises 34 coloured maps and 16 double page plates of fossils—Mr Frederick Graves, a graduate in medicine of the University of Edinburgh, has written a novel of medical student life of that city under the title of

"Ombra"; it will be published shortly by Mr. George A. Morton.

THE SANITARY INSTITUTE.—His Majesty the King has graciously consented to give his patronage to the Sanitary Institute. The institute was founded in 1876 and it is carrying on a large work in teaching and examining in hygiene and sanitary science, both in the United Kingdom and in other parts of the Empire. It maintains in London a permanent museum of sanitary appliances, open free to the public. Its members and associates number over 3000.

A STRICKEN RUSSIAN DISTRICT.—A correspondent of the *Novoe Vremya* in the Sisransk district mentions some villages on the Volga where there are about 5000 inhabitants called Tchuvasch who live in such filth that nearly all suffer from skin disease and trachoma, so that "blind Tchuvasch" has become a by-word. The medical aid available is too limited to cope with the evil which is growing more and more accentuated every year.

THE GUILD OF ST. LUKE.—The second annual festival of the Birmingham branch of the Guild of St. Luke will be held on St. Luke's Day, Oct. 18th, in St. Philip's Church, Birmingham, when a sermon will be delivered by the Lord Bishop of Worcester. This branch of the guild has been in existence for more than a year and its results are very gratifying. The honorary secretary is Mr. W. T. Elliott, 65, Temple-row, Birmingham, from whom any information may be obtained.

PATENT MEDICINES.—From an official statement issued by the Inland Revenue Department it appears that in the year ending March 31st, 1904, there were granted to medicine vendors in the United Kingdom 38,462 licences at 5*s.* each, yielding £9619 15*s.* to the Exchequer. The total amount received for stamps on patent medicines was £323,665 17*s.*, the number of stamps issued being as follows: at 1½*d.* each, 31,276,489; at 3*d.* each, 7,332,921; at 6*d.* each, 1,049,057; at 1*s.* each, 125,644; at 2*s.* each, 17,319; and at 3*s.* each, 8317—total, 39,810,247, the rates varying according to the price of the medicine.

GLASGOW EASTERN MEDICAL SOCIETY.—The opening meeting of the session was held on Oct. 5th, when the President, Dr. James Dunlop, delivered an address on the Sanatorial Treatment of Consumption. The following were elected office bearers for the session 1904–05. President: Dr. James Dunlop. Vice-President: Dr. Miller Semple. Secretary: Dr. P. S. Buchanan. Treasurer: Dr. J. Wilson Mathie. Reporting secretary: Dr. Hugh H. Borland. Sealkeeper: Dr. Thomas Russell. Council: Dr. Joseph Green, Dr. John A. C. Macewen, Dr. A. Laurie Watson, Dr. John Anderson, Dr. W. Adam Burns, and Dr. John W. Findlay. Auditors: Dr. Robert Wilson and Dr. T. C. Barras.

UNWHOLESOME COCKLES.—At the meeting of the Torquay town council held on Oct. 4th the medical officer of health reported further cases of illness caused by eating cockles obtained from the river Teign. The town clerk was instructed to call the attention of the Devon county council to the matter and also to write to the Local Government Board on the subject.—At a meeting of the St. Germans (Cornwall) rural district council held on Oct. 6th the chairman read the results of an examination of cockles taken from Millbrook lake. The cockles were found to be contaminated with sewage and unfit for food. It was decided to print the report in question and to circulate copies in Millbrook and the district.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The opening meeting of the tenth session of this society was held on Oct. 6th and the following office-bearers were elected for the ensuing year:—Honorary President: Mr. H. E. Clark. President: Dr. J. Hamilton. Vice-Presidents: Professor R. Stockman and Dr. T. K. Monro. Treasurer: Dr. T. Forrest. Secretary: Dr. J. Weir. Editorial secretary: Dr. R. W. Forrest. Sealkeeper: Dr. A. Wauchope. Extra members of Council: Dr. John Stewart, Dr. D. Macgilvray, and Dr. R. J. Carroll. Court Medical: Mr. T. Richmond, Dr. J. C. A. Smith, Dr. G. H. Edington, Dr. A. Roxburgh, and Dr. John Brown. Governor of Victoria Infirmary: Dr. C. E. Robertson.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AITKEN, ROBERT Y., M.D. Glasg., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Blackburn and East Lancashire Infirmary.

BARBER, G. W., M.R.C.S., L.R.C.P. Lond., has been appointed Acting District Medical Officer and Public Vaccinator, Kalgoorlie, West Australia, *pro tem.*

BLACKFORD, JAMES VINCENT, M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent at the City and County Asylum, Fishponds, Bristol.

CUDMORE, ARTHUR MURRAY, L.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Adelaide Hospital, South Australia.

GUNN, ALBERT A., M.B., Ch.B. Edin., has been appointed Honorary Assistant Physician to the Blackburn and East Lancashire Infirmary.

HEATHCOTE, HENRY CHARLES, M.B., B.Ch. Vict., has been appointed Medical Officer for the Newton St. Loe District by the Keynsham Board of Guardians.

HILL, ALFRED WILLIAM, M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Ophthalmic Surgeon to the Adelaide Hospital, South Australia.

LEICESTER, MORTON EDMUND, M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Lerryn District by the Liskeard (Cornwall) Board of Guardians.

MAGAREY, FRANK, M.B., Ch.M. Syd., has been appointed Honorary Assistant Surgeon to the Adelaide Hospital, South Australia.

MAPLETON, HENRY BANBURY, M.A. Oxon., M.D., C.M. Edin., D.P.H. Lond., has been re-appointed Medical Officer of Health for the Dawlish (Devon) Urban District.

MARTIN, JOHN M. H., M.D. Vict., F.R.C.S. Eng., J.P., has been appointed Honorary Consulting Surgeon to the Blackburn and East Lancashire Infirmary.

MORGAN, THOMAS WHITWORTH SEWELL, M.R.C.S. Eng., L.S.A., has been appointed Medical Officer for the Preston District by the Keynsham Board of Guardians.

ROGERS, RICHARD SANDERS, M.D. Edin., M.D. Adel., has been appointed Honorary Physician to the Adelaide Hospital, South Australia.

SAWYER, JAMES E. H., M.A., M.D. Oxon., M.R.C.P. Lond., has been appointed Pathologist at the General Hospital, Birmingham.

STEVENSON, ROLAND A., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Superintendent at the London Open-air Sanatorium, Pinewood, Wokingham, Berks.

TROTT, FREDERICK THOMAS, L.D.S., R.C.S. Eng., has been appointed Honorary Dentist to the Adelaide Hospital, South Australia.

VALLACK, A. S., M.B., Ch.M. Syd., has been appointed Visiting Surgeon and Dispenser to the Gaol at Berrima, New South Wales, Australia.

WADMORE, J. CHRISTOPHER, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant Resident Medical Officer at the London Open-air Sanatorium, Pinewood, Wokingham, Berks.

WILLETT, GEORGE GILMORE DRAKE, M.R.C.S. Eng., L.S.A., has been re-appointed District Medical Officer by the Keynsham (Somerset) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Assistant Surgeon.

BIRMINGHAM, CONVALESCENT HOSPITAL AND HOME FOR CHILDREN, Moseley Hall.—Honorary Acting Surgeon.

BURY INFIRMARY.—Junior House Surgeon. Salary £80, increasing to £90, with board, residence, and attendance.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100, with board and lodging.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120, with board and lodging.

DEVON COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £150, rising to £200, with board, lodging, and washing.

DOWNPATRICK, DOWN DISTRICT LUNATIC ASYLUM.—Junior Male Assistant Medical Officer, unmarried. Salary £100 per annum, with apartments, board, washing, &c.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Resident Medical Officer. Salary £100 per annum, with board, residence, and laundry.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House Physician and House Surgeon. Salary £80 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70, with board, residence, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon. Salary £.0 per annum, with board and residence.

street, London, W C — Salary £20, with board

Hos . . . W.—House Physician for six logist and Curator of Museum.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—Resident House Surgeon for six months. Salary at rate of £80 per annum, with board.

JEWISH HOSPITAL.—Resident Medical Officer. Honorarium commencing £80

MANCHESTER, MONSALL FEVER HOSPITAL.—Fourth Medical Assistant. Salary £100 per annum, with board, lodgings, and washing.

MARGATE ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon, as Junior and Senior for six months respectively. Salary at rate of £80 and £120 per annum, with board and residence.

NEW HOSPITAL FOR WOMEN.—Senior Assistant (female) in the Out-patient Department.

Fa . . . on, W —House ths. Salaries at

. . . edical Officer of

ROYAL FREE HOSPITAL, Gray's Inn road, W.C —House Physician and Casualty House Surgeon (males), also House Physician and House Surgeon (females). All for six months.

ROYAL LONDON OPHTHALMIC HOSPITAL, City road, E C.—Senior House Surgeon. Salary £100, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, washing, and lodging.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing

Taunton —Resident Assistant lary at rate of £50 per annum,

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £160 per annum, increasing to £200, with apartments, board, fuel, lighting, and washing.

WAKEFIELD, WEST RIDING ASYLUM —Assistant Medical Officer Salary £140, rising to £160, with apartments, board, washing, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On Oct. 9th, the wife of Hanway Beale, M D Lond, of Retford, of a daughter.

HERBERT.—On Oct. 7th, at Rutland avenue, Liverpool, the wife of Major H. Herbert, I.M S, of a son.

MORGAN.—On Oct 4th, at Hôtel des Balances, Lucerne, the wife of Captain Edgar Morgan, I.M S, of a son, prematurely (stillborn)

MARRIAGES.

ANNING—HAIGH —Oct 5th, at the parish church, Otley, Yorks, by Rev. Neville Egerton Leigh, vicar of Kirkstall, assisted by Rev. Morris Young, George Paul Anning, M R C S. Eng, L R C P, London, of Kirkstall, Leeds, to Clara Evelyn, elder daughter of Frederick Haigh, late of The Holme, Bramhope, now of Lyddon terrace, Leeds

ATKINS—SMITH —On Sept. 29th, John Atkins, M.B, F R C S, to Elizabeth May, daughter of J. D Smith, of Halesworth road, S E

BATLEY—HAYLETT —On Oct 6th, at . . . C. E Carlo, B A, Albert Brook . . . Lond, son of the late Joseph Ba . . . May, daughter of the late . . . Haylett of Brentwood . . . ohn's Episcopal Church, . . . Pitlochry, to Verbee . . . t daughter of Dr. H. W.

FORBES—BARRETT.—On Oct. 5th, at St John the Baptists, Kensington, by the Rev Hector de Courcelles, M.A., Henry Arthur Fotherby, L R C P, M R C S, of Headcorn, Kent, son of H I Fotherby, M.D Lond, of Woodthorpe Cote, Reigate, to Jane (Bee), eldest daughter of Dr A. E Barrett of Holland Park avenue and granddaughter of the late Hon. Thomas Robert Keppel

DEATHS.

EDMONDS —On Oct. 7th, at Fowey, Cornwall, Frederic Hermenigildo Edmonds, M R C S, L.R C P, of 21, Croal street, Georgetown, Demerara, aged 56 years

MACKENZIE.—On Sept. 25th, . . . kenzie, M D, late of Bulham, . . . D S Mackenzie, The Manse, . . . of the late John Livy, M D, of .

PETERS.—On Oct. 7th, at Westwood, Ryde, Isle of Wight, Edmund Henry Peters, M D., aged 84 years.

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PALMISTRY OR PSEUDO-PATHOLOGY?

THE palmist who in a recent trial maintained that he could diagnose a bilious tendency from an inspection of the palm of the hand might certainly have quoted precedent in his own favour. The older palmists or "chiromancers" professed to be able to discover a man's state of health in precisely the same manner. Thus, Richard Sanders, writing on "Physiognomie and Chiromancie" in 1653, deals at very great length with the aspect of the hand as an index to the state of the body From the lines of the hand he professes to discover whether a man is a gouty subject or long lived or eupeptic, whether he is suffering from a wound in the head, or, in the case of a woman, whether she will die in childbed. Under each of his 48 diagrams of the palm of the hand at least one medical explanation is to be found These explanations are manifestly based on the doctrine of "signatures," according to which even the lines in the hand are a kind of signal from the unseen world to the seen Thus, lines crossing one another on the palm of the hand betoken diseases, accidents, sudden changes, and crises. Astrology, which is in itself a perfectly arbitrary form of signaturism, plays a large part in chiromancy Different parts of the hand are presided over by planets and stars, such as the sun or Venus, or by the signs of the Zodiac, and thus any given line in the hand may be explained in reference to the attributes of a give . instance, that a part of . . . of the crab, then lines i . . . a tendency to cancer Paracelsus worked out the "science" of . . . it also contains some beginnings of pathological method and knowledge Jealous Mahomedans are said to allow Christian physicians to inspect only the hands of the invalids in their harems The hand is thrust out from behind a curtain and disease must be diagnosed from an inspection of its shape, colour, lines, and temperature. Is this pathology or merely palmistry, or both?

DESTRUCTION OF CATS.

To the Editors of THE LANCET.

SIRS,—I am the foundress of the "Islington Lost Cats' Shelter," and reside on the premises, destroying with my own hands all the unwanted cats and dogs we are unable to keep or find good homes for It is therefore my painful duty to take the lives of thousands of animals during the year and this I do by means of lethal boxes. I formerly drowned cats in a galvanised wire cage, plunged instantaneously into lukewarm water, and this causes death in about one minute Public opinion was, however, very much opposed to my method of killing and some writers in the leading cat fanciers' journal, *Our Cats*, wrote against it and me in words of strong condemnation I have used chloroform for some time, but I am myself very doubtful as to its being really a merciful way of destroying cats. My boxes are of the ordinary kind, air-tight chambers, in which the required quantity of chloroform is placed on a piece of cotton wool. Very often the poor little creatures cry and jump about and struggle in evident distress, so how can this be really merciful? My old method of drowning was far quicker Most of those who write on the subject are, I fancy, sentimental women—possibly hysterical women. I am giving my time, money, and my life to the service of dumb animals and the mitigation of some, at least, of the suffering of London's stray cats and I wish, therefore, to destroy those who have to die in the most humane manner possible Will some of the medical men who read your valuable journal be so kind as to give me their candid opinion as to whether death by . . . the best method . . . consider drowning . . . as cruel as my er . . .

Islington, N, Oct 4th, 1904 KATE CORDING

MOTOR CARS AND MEDICAL MEN.

A CORRESPONDENT has forwarded to us a copy of the "Continental" . . . Contrary to the apparent meaning . . . . . certainly has right upon a . . . themselves Still more . . . it certainly is advisable that they should know not only where they can obtain repairs to their machines but also to those whom they may unfortunately injure, or even for themselves We have looked

Communications, Letters, &c., have been received from—

A.—Dr. T. L. Anderson, Fremantle, Western Australia.

B.—Dr. James Burnet, Edinburgh; Dr. Walter Broadbent, Brighton; Mr. J. T. Bennetts, Sturminster-Newton; Belgrave Hospital for Children, Lond., Secretary of; Monsieur O. Berthier, Paris; Bayer Co., Ltd., Lond.; Messrs. Bates, Hendy, and Co., Lond.; Mr. A. B. Batley, Christchurch; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. S. H. Benson, Lond.; T. B. Brown, Ltd., Lond.; Birmingham and Midland Hospital for Skin, &c., Diseases, Secretary of.

C.—Dr. E. O. Croft, Leeds; Major R. Caldwell, R.A.M.C., Meerut; Dr. Joseph A. Capps, Chicago; Messrs. E. Cook and Co., Lond.; Messrs. G. Costa and Co., Lond.; Messrs. Cassell and Co., Lond.; Messrs. T. Christy and Co., Lond.; Mr. Wilbur F. Crafts, Washington; Mr. F. W. Clarke, Chorlton-cum-Hardy; Messrs. J. and A. Churchill, Lond.

D.—Dr. A. F. Dimmock, Harrogate; Messrs. Dawson and Sons, Lond.; Mr. E. Darke, Lond.; Down District Asylum, Downpatrick; Darlington Hospital, Secretary of.

E.—E. R.; Mr. H. Elliot-Blake.

F.—Mr. J. E. Foster, Cambridge; Dr. Alexander Forsyth, Leytonstone; Mr. H. Frowde, Lond.; Dr. C. Fraser, Dunfermline; Dr. J. Fortune, Exminster.

G.—Dr. W. Herbert Gregory, Beverley; Mr. T. W. H. Garstang, Altrincham; Gloucester General Infirmary, Secretary of.

H.—Mr. J. Hammond, Pontypridd; Mr. E. F. G. T. Heap, Lond.; Horton Infirmary, Banbury, Secretary of; Messrs. G. N. Haden and Sons, Lond.; Messrs. Haasenstein and Vogler, Geneva; Mr. R. B. Hay, Paisley; Mr. J. V. Hartley, Transkei, South Africa; Messrs. Wm. Hodge and Co., Glasgow; Mr. R. Croft Hiller, Manchester; Dr. Walter K. Hunter, Glasgow; Mr. J. Hart, Lond.

I.—Institute of Oil Painters, Lond., President and Council of the.

J.—Messrs. J. F. Jones and Co., Paris; J. W.

K.—Dr. Charles Kerr, Dundee; Dr. Robert Knox, Lond.; Messrs. R. A. Knight and Co., Lond.;

L.—Mr. H. K. Lewis, Lond.; Messrs. Lee and Nightingale, Liverpool; Miss Leech, Lond.; Dr. F. Lemon, Hawthorn, Victoria; Leeds Hospital for Women and Children, Secretary of.

M.—Dr. J. Moore, Huddersfield; Mr. B. G. A. Moynihan, Leeds; Manchester Corporation, Town Clerk of; Mr. P. Lockhart Mummery, Lond.; Messrs. C. Mitchell and Co., Lond.; Dr. J. Murray-Gibbes, Angledool, New South Wales; Mr. E. Merck, Darmstadt; Mr. Sydney E. Miles, Lond.; Manchester Jewish Hospital, Secretary of; Manchester Medical Agency.

N.—Messrs. Nicholson and Co., Goodmayes; New Lines Introduction Co., Lond., Manager of; National Society for Employment of Epileptics, Lond., Executive Committee of; Mr. H. Needes, Lond.; Mr. J. C. Needes, Lond.

O.—Observant.

P.—Mr. Y. J. Pentland, Edinburgh; Dr. W. Harford Phelps, Leigh Woods; Mr. J. Pond, Norwich; Messrs. Peacock and Hadley, Lond.

Q.—Queen's Nurses' Institute, Cardiff.

R.—Dr. R. R. Rentoul, Liverpool; Dr. J. Robertson, Birmingham; Messrs. Reynolds and Branson, Leeds; Royal Photographic Society, Lond., Secretary of; Messrs. E. J. Reid and Co., Lond.

S.—Dr. D. W. Samways, Topsham; Dr. E. Schloesser, Wiesbaden; Dr. J. A. Shaw-Mackenzie, Lond.; Messrs. H. Sleeman and Co., Lond.; Messrs. Spelmans, Norwich; Professor W. Stirling, Manchester; Mr. F. Campbell Snodgrass, Melbourne; Suffolk; Dr. J. E. Spicer, Lond.; Messrs. C. W. Simpson and Co., Liverpool; Dr. J. L. Steven, Glasgow; Messrs. Spiers and Pond, Lond.; Scholastic, Clerical, &c., Association, Lond.

T.—Mr. S. Thistlethwaite, Ashton-on-Mersey; Taunton and Somerset Hospital, Secretary of.

V.—Dr. J. F. de Villiers, Lond.; Vernet-les-Bains, Director of Baths of.

W.—Dr. Henry Wade, Edinburgh; Wolverhampton General Hospital, Secretary of; Messrs. F. Williams and Co., Lond.; Messrs. J. Wright and Co., Bristol; Messrs. A. J. Wilson and Co., Lond.; Messrs. H. Wilson and Son, Lond.; Dr. W. Winslow, Wallingford.

Y.—Dr. E. G. Younger, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. F. C. Angear, Chatham; Mr. A. G. Anderson, Aberdeen; Dr. M. Aikman, Glasgow; Messrs. T. and M. Armstrong, Lond.; Messrs. Allen and Hanburys, Lond.; A. C. G.; A. J. M.

B.—Dr. E. T. Born, J.P., Falkland Islands; *Boston Transcript*, Boston, Manager of; B. B. M.; Mr. H. Butterfield, Northampton; Bootle Corporation, Cashier of; Bury Infirmary, Secretary of; Dr. J. F. Boa, Kildonan; B. F. F.; Mr. A. L. Bright, Brighton; Mr. A. B. Batley, Lond.

C.—Cortland Wagon Co., Lond.; C. M. L.; City Orthopædic Hospital, Lond., Secretary of; Dr. S. G. Champion, Bournemouth; Dr. E. H. Colbeck, Lond.; Messrs. J. Cundall and Sons, Lond.; C. A. J.; Mr. A. C. Campbell, West Hartlepool; Mr. B. F. S. Caldwell, Daventry; Mr. G. Chandler, Black Torrington.

D.—Dr. J. Davidson, Perth; Dr. J. S. Dale, Paisley; "Durham," Portrush; Mr. J. T. Davenport, Lond.; Sister Douglas, Glasgow; Dr. W. H. Davison, Erdington.

E.—E. H. S.; E. T.; E. B.

F.—Dr. A. Foster, Blackburn; Messrs. S. and A. Fuller, Bath; Mr. H. J. Fern, Cork; Mr. E. B. Fuller, Lond.

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A Lecture

ON

SOME PRACTICAL POINTS IN ABDOMINAL SURGERY;

WITH SPECIAL REFERENCE TO A SIMPLE TECHNIC FOR APPENDICECTOMY AND INTESTINAL ANASTOMOSIS

Delivered at the Annual Meeting of the Montgomery Gynæcological Society of the Jefferson Medical College Philadelphia, Pa., on Feb. 2nd, 1904.

By FREDERICK HOLME WIGGIN, M.D.,

VISITING SURGEON TO THE CITY HOSPITAL, AND GYNÆCOLOGIST TO ST. ELIZABETH'S HOSPITAL, NEW YORK; FORMERLY PRESIDENT OF THE NEW YORK COUNTY AND STATE MEDICAL ASSOCIATION AND VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION

GENTLEMEN,—In thinking over the various difficulties encountered in the earlier years of my professional career in an effort to find a suitable subject as a basis for my remarks this evening it has occurred to me that possibly a few words in regard to the general care of patients about to undergo an abdominal section, both before and after the performance of the operation, might prove useful to you, if serving only to impress more deeply on your minds matters that already have probably been taught you by your able professors, and as diseases of the vermiform appendix and intestinal injuries are so often associated with pelvic disorders I propose also in the course of my remarks to describe a simple technic satisfactorily employed for many years in the removal of the appendix and that of an easy and uncomplicated method of uniting divided bowel ends. Many of the details about to be described may seem to some of you unimportant and unworthy of your attention, but rest assured they are all of great importance and taken in their entirety have enabled me to reduce the rate of mortality following operations undertaken by me for the relief of chronic intra-abdominal disorders from 20 per cent. or more 15 years ago to 1 per cent. or less at the present time.

PREPARATION OF THE PATIENT.

When the condition for which the operation is to be undertaken is chronic and all the time desired can be had for the preparation of the patient for the ordeal which she is to undergo, much can be done in the way of preparatory treatment which will not only diminish the risk about to be incurred by her but will ultimately hasten convalescence and save the operator many anxious hours. In such a case it is for the patient's welfare that the hospital where the operation is to be performed should be reached or the trained nurse employed if the patient is to remain at home at least one week prior to the date fixed upon for the operation. This allows the individual to become accustomed to the attendants or the environment which is of undoubted importance as it tends to lessen the nervous tension which is naturally great in such a crisis even in the best of circumstances. During this week the sufferer should be encouraged to spend much of the time in the recumbent position for the purpose of getting thoroughly rested, and massage should be employed as it improves the circulation, promotes digestion, and improves the general bodily welfare. As far as it is compatible with a healthy mental condition visitors and friends should be excluded. The nurse should keep a daily record of the patient's bodily temperature, pulse, and respiration. An examination of the heart and lungs and an analysis of the urine should be made at this time. And it is of great importance that the intestinal canal should not be distended by gas at the time of the operation; attention must be paid to unloading and emptying the bowels as well as to getting the digestive organs into good working order. This is best accomplished, in my experience, by giving at 10 o'clock each evening for the first three days in this week of preparation two ounces of a mixture of equal parts of castor oil and glycerine to which five drops of tincture of opium have been added to prevent griping. This in turn is followed on each of the succeeding days, except that fixed upon for the operation, by an enema of from two to four quarts of saline solution, the rectum finally being washed out with a pint of soapsuds three hours before the performance of the operation. The large enema, just alluded to, is best given with the patient lying in the dorsal position with her hips elevated and her shoulders and head depressed, a fountain syringe being used for the purpose, the reservoir of which should not be elevated more than 18 inches above the patient's body. The fluid should have a temperature of 120° F. and should be introduced into the canal slowly, being allowed to flow for two minutes, then intermitted for five minutes, and again allowed to flow for two minutes. If the patient has an urgent desire to go to stool after a pint of the solution has been introduced into the bowels it is best to allow her to do so and then after a short interval for rest the process just described can be repeated until she complains of a feeling of distension, intestinal colic, or nausea, which does not pass away within the five minutes' interval. By perseverance in the manner above described several quarts of saline solution can be usually introduced into the colon in the course of three quarters of an hour with but slight discomfort to the patient who should be encouraged to retain the fluid for from 30 to 60 minutes before it is allowed to escape. The administration of these enemata should be supervised by the physician, as the nurse seldom knows how to accomplish the introduction of the desired quantity of fluid into the intestinal tract, or if she has the knowledge and experience she has not sufficient authority over the patient to effect the desired result.

The patient's diet during this week of preparation should be of an easily digestible nature and she should be encouraged to partake freely of water for the purpose of getting the bodily tissues well filled with fluid. Hot baths of ten minutes' duration should be given daily, not only for cleansing purposes but to promote the secretions of the skin and kidneys, special attention being paid to the navel and pubic region. The time of operation should when possible be arranged for a few days following the cessation of the menstrual flow and the vagina cleansed by douching. The administration three times daily of a hypodermic injection of 30 minims of a specially prepared aqueous solution of a grain of strychnine or will often prove of great [illegible] overcoming nervousness, inducing sleep and promoting the action of the bowels—in other words acting as a general tonic to the system and serving to prevent the occurrence of shock at the time of the operation, as has been pointed out by Livingston. The formula of the ergot solution recommended by him is as follows: Dissolve two grains of chlorotone in one ounce of sterilised distilled water, in which solution dissolve one drachm of Squibb's aseptic solid extract of ergot and filter. In making these injections the needle should be pushed deeply into the muscular tissues and the fluid injected slowly to avoid over distension of the tissues and consequent pain. There need be no fear of an abscess resulting provided the skin syringe needle and solution are sterile. The best place which I have found for making these injections is the patient's left deltoid. While the first of these injections in a person whose general condition is poor is apt to induce redness and swelling of the part and sometimes causes considerable pain, subsequent injections will not tend to increase this swelling but rather to make it disappear. This can also be aided by the application of a wet dressing. In a recent case so treated the patient, who had a weak heart and consequently feeble circulation, was so toned up that at the end of a period of anæsthesia lasting two hours during which a serious operation was performed, her pulse rate was no higher than at the beginning. If, however, circumstances do not permit us to follow the plan of preparation just outlined the best course to pursue in my opinion is to give the patient the day before the operation two ounces of the castor oil mixture already mentioned, this to be followed after it has taken effect by a large saline enema and this in turn the next morning about three hours before the operation by a small enema of a pint of soapsuds for the purpose of washing out the rectum. The patient's skin covering the abdomen is prepared for the operation on the previous day when practicable by thoroughly cleansing and shaving it, applying a soap poultice for four hours over the site of the proposed incision, then replacing it after the soap has been washed off by a compress moistened in a 1 per cent. formalin solution,

which is covered with rubber tissue. This compress is allowed to remain until the patient is placed on the operating table It is wise to fix upon as early an hour of the day as possible for the operation, as the patient in this case has less time in which to become exhausted from want of food, or restless, or nervous from the dread of what is to come. It is of great importance that, once the hour has been determined, there should be no postponement, as I have seen patients almost collapse under the extra nervous strain entailed by even an hour's delay.

If the operation is to be performed at an early hour—i.e., 8 A.M.—the patient should be given a peptonised milk punch at 11 o'clock the previous evening and another at 5 A.M. if she is awake. If an afternoon hour has been decided upon additional peptonised milk punches may be given to the patient at 8 and 11 A.M. If the case is of an acute character and an immediate operation is demanded little more can be done than to shave and to cleanse the skin in the manner already described, or the skin can be prepared after the patient is placed on the operating table by the use of a germicidal depilatory, which will be referred to again later. If the patient is suffering from collapse due to intestinal perforation an effort should always be made to stimulate her by hypodermic injections of ergot and strychnine and intravenous injections of saline solution. If the patient does not respond to this stimulation the operation should not be performed. If, on the other hand, the patient rallies the operation should be done with as little delay as practicable, but even in these cases it should not be forgotten that we must, to be successful, have plenty of light, assistants, and facilities for intra-abdominal irrigation.

When the operation is to be performed in a private residence a room with a north light should preferably be selected. Its furniture should be removed at least 24 hours before the room is to be used for this purpose. After it has been thoroughly cleansed the windows should be left wide open for two or three hours, then closed, and the woodwork wiped with bichloride solution, 1 in 1000, the floor being dampened with the same solution. A table, 20 inches wide and 30 inches high, and varying in length according to circumstances, will be needed, as well as several small tables or stands, and a wooden-bottomed chair. All of these articles should be cleansed before placing them in the rooms; they should be washed with bichloride solution shortly before being used. Several large pitchers, four or five basins, several platters, and a fish kettle for sterilising the surgeon's instruments will also be needed. All of these latter articles not made of metal should be cleansed and immersed in bichloride solution until needed in the operating room. The room should be closed after all the articles of furniture have been placed in it and should remain so until needed. For emergency operations it is best to make no attempt to clean the room in order to avoid vitiating the air with dust; the floor should, however, be covered with a sheet wet with bichloride solution. Several dozen towels sterilised by boiling or by steaming in a steriliser, and several gallons of cold and hot water sterilised by being boiled for one hour, will also be needed. The instruments are sterilised by being boiled ten minutes in a 2 per cent. soda solution, except those with a cutting edge which are immersed for five minutes in carbolic acid, 95 per cent., which is then washed off.

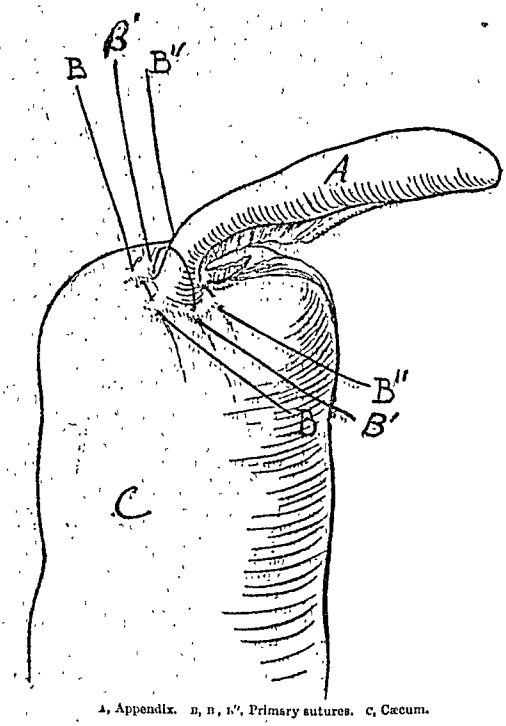
The following satisfactory method for preparing catgut is employed by the general drug department of the City and Bellevue Hospitals of New York City: (1) plain or smooth catgut, the fat is first removed by boiling in ether in a condenser for one hour; (2) it is then boiled in absolute alcohol for one and a half hours; and (3) it is then taken from the flask with sterilised forceps and put in glass jars containing a 1 to 1000 chloroform solution of biniodide of mercury. In using rough catgut each strand is wound on glass or wooden reels or is cut in desired lengths and tied up in figure of eight loops. The chromicised (rough) catgut is sterilised as follows: (1) the fats are removed from the rough catgut by boiling for one hour in ether and this is followed by soaking for one hour in alcohol; and (2) the catgut is then soaked in the following chromicising solution from 24 to 36 hours: sodium bichromate three grammes, absolute alcohol three litres, then boiled over steam until the bichromate has all been dissolved. The catgut is then removed and dried by being stretched over hooks, the ends being secured by artery clamps and allowed to remain for one week, and is then tied up in figure-of-eight loops and boiled for one and a half hours in absolute alcohol, and is finally placed in glass jars containing a 1 to 1000 chloroform solution of biniodide of mercury. The dressings are sterilised at the hospital in the usual manner by heat, but for private practice these and suture and ligature material are purchased from a trustworthy manufacturer.

The following method for cleansing the hands has been employed by me for the past five years and it has been found entirely satisfactory: (1) the hands are thoroughly washed in green soap and are then well rinsed in hot water; (2) they are then immersed in 65 per cent. alcohol and allowed to remain for a few minutes; and (3) they are then washed in an alcoholic solution of mercuric bichloride, 1 to 300. After this all traces of the previous washing solutions are removed by immersion in distilled water. The nails are cleaned by the use of aseptic gauze, wet with alcohol, which is rubbed along the edges of the nails and readily finds its way beneath them and removes any detritus that may be there. This is a better method than that of using a sharp instrument for the same purpose, as the gauze so used never injures any of the sensitive tissues beneath the nails and therefore lessens the opportunity for infection that sharp instruments used for this purpose sometimes offer. If there are any abrasions on the hands attention will be called to them by the smarting caused by their immersion in the alcohol and the abraded surfaces can then be cauterised with glacial acetic acid, care being taken to place the acid well between the edges of the cut by means of a wooden toothpick, and an eschar will be formed which will thoroughly protect the underlying tissues. After these preparations of the hands have been made all who are to assist in the operation put on sterilised rubber gloves. However, I do not usually wear them for intra-abdominal work, for the reason that even thin gloves tend to diminish the sensibility of the finger tips, which in this class of cases often have to take the place of eyes in furnishing necessary information to the operator.

The patient should be clad for the operation so as to reduce the bodily exposure to a minimum. The anæsthetic should be administered to her when possible before she is brought into the operating room. If for the administration of the ether a Dawbarn inhaler is used and the cage is filled with absorbent cotton, saturated with the fluid at the start, the mouthpiece being rapidly brought down over the patient's nose and chin, so as to exclude the air, the anæsthetic state will be quickly induced, the stage of excitement will usually be avoided, and the patient will be made insensible to pain and kept in this condition for an hour with but three ounces of ether, and for an additional hour with only two more ounces. After the patient has been placed under the influence of the anæsthetic agent and put on the operating table, on which sterilised blankets have been placed in such a manner as to admit of their being folded over the patient's chest and lower limbs, leaving only the abdomen exposed, the compress previously alluded to is removed and the skin is washed in much the same manner as that already described for the hands and is as follows. The tissues are well scrubbed with tincture of green soap by means of a piece of gauze which is preferable to the brush ordinarily used, as there is less tendency to injure the tissues and its use therefore lessens the danger of septic infection. After the soap has been well rinsed off the parts are washed with 65 per cent. of alcohol and this in turn is followed by a 1 to 300 alcoholic solution of mercuric chloride, the parts being finally washed with sterile water. The navel is washed out with a strong solution of hydrogen peroxide known as hydrozone, in which 30 volumes of oxygen are dissolved in water. When time does not permit of making these more or less elaborate preparations before the operation the skin can be prepared in five minutes after the patient is placed on the operating table by the use of a germicidal depilatory, several satisfactory ones being at present on the market. The preparation is thickly spread over the skin and allowed to remain on for five minutes and is then washed off with sterilised gauze and water, the parts being then ready for immediate operation. The only objection to the use of preparations of this kind for cleansing the skin is that the chemicals of which they are composed occasionally produce an annoying irritation.

While the operation is progressing the anæsthetist, who should always, when possible, be an experienced physician, should watch the patient constantly and pay no attention to the operation. As soon as the reflexes have disappeared he should raise the inhaler from the patient's face, replacing it

FIG. 1.



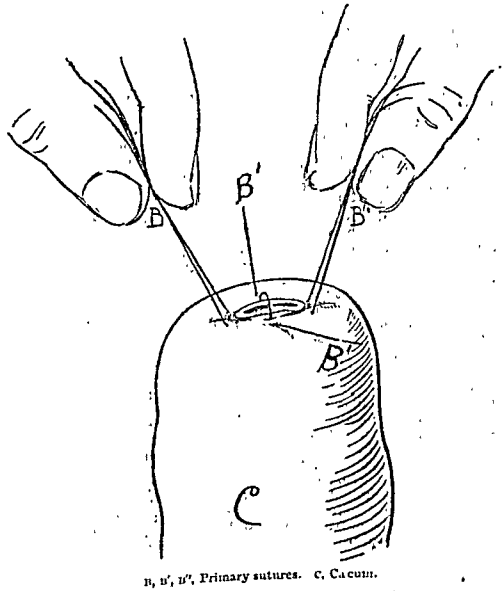
A, Appendix. B, B', B'', Primary sutures. C, Cæcum.

as soon as they return. As soon as the pulse increases from 20 to 30 beats a minute a hypodermic injection of ergot and strychnine is administered and repeated as needed from time to time until 90 minims of the ergot solution and one-twelfth of a grain of strychnine have been given. If in spite of these stimulating injections the pulse rises to 150 beats a minute an intravenous infusion of saline solution is at once resorted to.

The incision in the abdominal wall is made by preference over either one of the recti muscles, but when practicable over the right, the fibres of the muscles being separated in order to reach the peritoneum, a portion of which is grasped by two pairs of thumb forceps, lifted up, and an opening made in it; by so doing the danger of injuring diminished. It is of is going on that the anæsthetist should see to it that the patient is breathing quietly and regularly; much can often be accomplished toward this end by removing the inhaler occasionally from the patient's face for the purpose of giving her undiluted air for a little while, embarrassed respiration and rigid muscles being due to the lack of sufficient oxygen. For the purpose of separating the parts catgut sutures are next inserted in the tissues forming the edges of the wound and are passed through all of them between the peritoneum and the fascia covering the rectus muscles. These sutures injure the tissues less than ordinary retractors and therefore leave the wound in a much better condition for primary union. These same sutures may when necessary be used to close the wound temporarily if by any accident the patient should come out from under the anæsthetic and attempt to vomit or cough during the operation, thus preventing the forcing of the intestines out upon the abdominal wall.

The abdominal cavity now having been opened we will assume that the appendix is diseased, and requires removal and that portion of the cæcum to which it is attached is therefore now brought outside the abdominal cavity. After the vessels in the meso-appendix have been ligated and the appendix freed from it by division of the tissues the appendix is drawn through an opening made in a gauze pad which covers the wound and protects it and the abdominal cavity as well. Before the appendix is cut off, which is done as close to the cæcum as possible, three silk sutures are passed through the cæcal tissue, one on either side of it and the third midway between these two (as shown in Fig. 1), and the diseased organ is then removed. Before this is done the sutures on either side are given to assistants to hold in order that the cæcal tissue may not retract into the abdominal cavity at this critical stage (as shown in Fig. 2), and also to close the opening temporarily should the patient partially recover consciousness and attempt to vomit or to cough before the opening in it is permanently closed by tying the sutures. The tissues are next rendered aseptic by means of a drop or two of hydrozone; after this has been done the edges of the wound in the cæcum are turned in by an assistant by means of a pair of thumb forceps (as shown in Fig. 3) and the middle suture is tied and its ends are cut off before the ends of the other two sutures are cut, the site of the wound having again been disinfected by a few drops of hydrozone; a second row of sutures, this time chromicised catgut, No. 00, are placed in the tissues, as shown in Fig. 4, for the purpose, when they are tied, of making assurance doubly sure that healthy peritoneal surfaces are in contact (as shown in Fig. 5). For the further protection of the parts and to prevent the formation of intestinal adhesions which may cause trouble later the stump of the meso-appendix, when long, is attached to the cæcal tissue over the wound by one or two sutures.

FIG. 2.



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The following satisfactory method for preparing catgut is employed by the general drug department of the City and Bellevue Hospitals of New York City: (1) plain or smooth catgut, the fat is first removed by boiling in ether in a condenser for one hour; (2) it is then boiled in absolute alcohol for one and a half hours; and (3) it is then taken from the flask with sterilised forceps and put in glass jars containing a 1 to 1000 chloroform solution of biniodide of mercury. In using rough catgut each strand is wound on glass or wooden reels or is cut in desired lengths and tied up in figure-of-eight loops. The chromicised (rough) catgut is sterilised as follows: (1) the fats are removed from the rough catgut by boiling for one hour in ether and this is followed by soaking for one hour in alcohol; and (2) the catgut is then soaked in the following chromicising solution from 24 to 36 hours: sodium bichromate three grammes, absolute alcohol three litres, then boiled over steam until the bichromate has all been dissolved. The catgut is then removed and dried by being stretched over hooks, the ends being secured by artery clamps and allowed to remain for one week, and is then tied up in figure-of-eight loops and boiled for one and a half hours in absolute alcohol, and is finally placed in glass jars containing a 1 to 1000 chloroform solution of biniodide of mercury. The dressings are sterilised at the hospital in the usual manner by heat, but for private practice these and suture and ligature material are purchased from a trustworthy manufacturer.

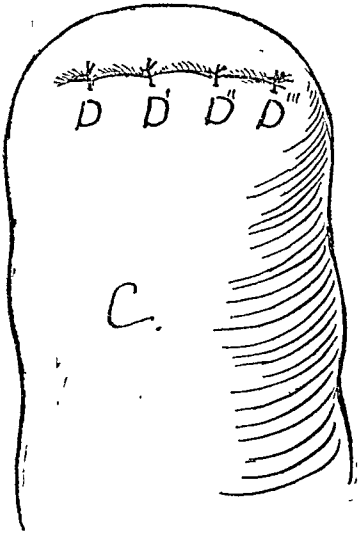
The following method for cleansing the hands has been employed by me for the past five years and it has been found entirely satisfactory: (1) the hands are thoroughly washed in green soap and are then well rinsed in hot water; (2) they are then immersed in 65 per cent. alcohol and allowed to remain for a few minutes; and (3) they are then washed in an alcoholic solution of mercuric bichloride, 1 to 300. After this all traces of the previous washing solutions are removed by immersion in distilled water. The nails are cleaned by the use of aseptic gauze, wet with alcohol, which is rubbed along the edges of the nails and readily finds its way beneath them and removes any detritus that may be there. This is a better method than that of using a sharp instrument for the same purpose, as the gauze so used never injures any of the sensitive tissues beneath the nails and therefore lessens the opportunity for infection that sharp instruments used for this purpose sometimes offer. If there are any abrasions on the hands attention will be called to them by the smarting caused by their immersion in the alcohol and the abraded surfaces can then be cauterised with glacial acetic acid, care being taken to place the acid well between the edges of the cut by means of a wooden toothpick, and an eschar will be formed which will thoroughly protect the underlying tissues. After these preparations of the hands have been made all who are to assist in the operation put on sterilised rubber gloves. However, I do not usually wear them for intra-abdominal work, for the reason that even thin gloves tend to diminish the sensibility of the finger tips, which in this class of cases often have to take the place of eyes in furnishing necessary information to the operator.

The patient should be clad for the operation so as to reduce the bodily exposure to a minimum. The anæsthetic should be administered to her when possible before she is brought into the operating room. If for the administration of the ether a Dawbarn inhaler is used and the cage is filled with absorbent cotton, saturated with the fluid at the start, the mouthpiece being rapidly brought down over the patient's nose and chin, so as to exclude the air, the anæsthetic state will be quickly induced, the stage of excitement will usually be avoided, and the patient will be made insensible to pain and kept in this condition for an hour with but three ounces of ether, and for an additional hour with only two more ounces. After the patient has been placed under the influence of the anæsthetic agent and put on the operating table, on which sterilised blankets have been placed in such a manner as to admit of their being folded over the patient's chest and lower limbs, leaving only the abdomen exposed, the compress previously alluded to is removed and the skin is washed in much the same manner as that already described for the hands and is as follows. The tissues are well scrubbed with tincture of green soap by means of a piece of gauze which is preferable to the brush ordinarily used, as there is less tendency to injure the tissues and its use therefore lessens the danger of septic infection. After the soap has been well rinsed off the parts are washed with 65 per cent. of alcohol and this in turn is followed by a 1 to 300 alcoholic solution of mercuric chloride, the parts being finally washed with sterile water. The navel is washed out with a strong solution of hydrogen peroxide known as hydrozone, in which 30 volumes of oxygen are dissolved in water. When time does not permit of making these more or less elaborate preparations before the operation the skin can be prepared in five minutes after the patient is placed on the operating table by the use of a germicidal depilatory, several satisfactory ones being at present on the market. The preparation is thickly spread over the skin and allowed to remain on for five minutes and is then washed off with sterilised gauze and water, the parts being then ready for immediate operation. The only objection to the use of preparations of this kind for cleansing the skin is that the chemicals of which they are composed occasionally produce an annoying irritation.

Whil[illegible]g the anæsthetist, who should [illegible] experienced physician, should [illegible] and pay no attention to the operation. As soon as the reflexes have disappeared he should raise the inhaler from the patient's face, replacing it

will be found that the peritoneum is turned in and that the stitches, with the exception of the last one, are not visible (see Fig. 10). If some of them have been so loosely tied that the sutures can be seen on the peritoneal coat it is best to insert a few Lembert sutures at these points. The sutured portion

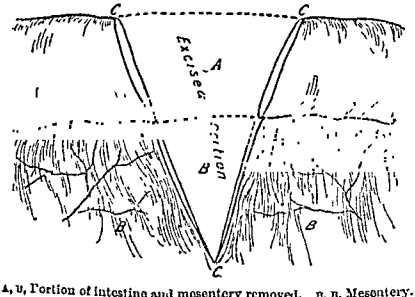
FIG. 5.



C, Cæcum. D, D', D'', D''', Secondary sutures tied.

of the bowel should then be washed with a small quantity of a 50 per cent. solution of hydrozone in saline solution, [illegible] ned into the abdominal [illegible] d and filled with normal [illegible] wound is closed.

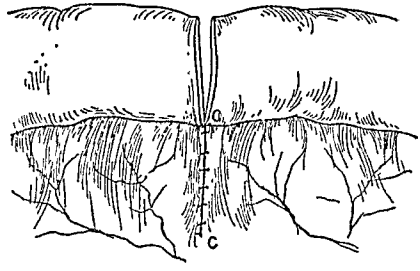
FIG. 6.



A, B, Portion of intestine and mesentery removed. B, B, Mesentery. C, C, C, Lines of the incision.

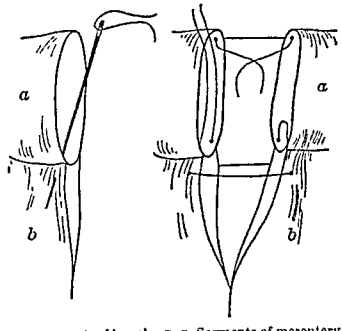
By the method of suturing just described any portion of the intestinal tract can be united to any other portion. Anastomosis of segments of ileum and colon may be effected by this method in the following manner. A suture is passed through all the coats of the greater and lesser intestinal segments at their mesenteric border, care being taken to adapt the border of either segment to the corresponding border of the other; this suture is tied and the ends are left long; a second suture is passed through the side of the larger segment, starting from the lumen at the point where the superior border of the smaller segment touches it and through which the suture is also passed, and is tied, the ends being left long; a third suture is passed through all the coats

FIG. 7.



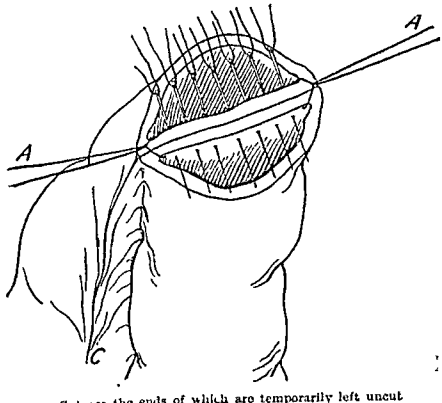
C, C, Incision in the mesentery united by interrupted sutures.

FIG. 8.



A, A, Segments of bowel. B, B, Segments of mesentery.

FIG. 9.



A, A, Sutures the ends of which are temporarily left uncut and by means of which the tissues are held while the needles are being placed. C, Mesentery.

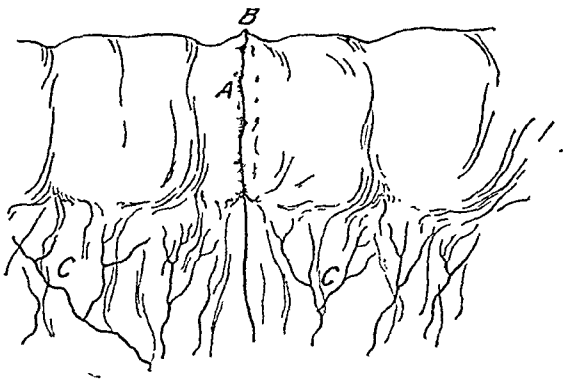
of the highest free end of the larger segment. The location of these sutures, which are also used to hold the parts in apposition while the other sutures are being passed, and the accurate adaptation of the mesenteric border of segments, are shown in Fig. 11. The other necessary sutures to

unite the divided intestinal edges are placed in the manner already described and the anastomosed bowel ends appear as shown in Fig. 12.

CLOSURE OF THE ABDOMINAL WOUND.

In closing the wound in the abdominal wall I have of recent years been in the habit of uniting the tissues layer

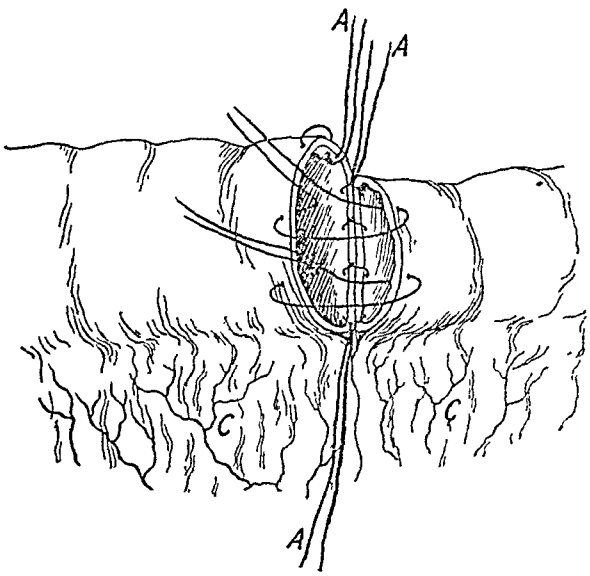
FIG. 10.



This figure shows the intestines after the completion of the anastomosis. A, Line marking the point of union between the ends of the bowel, showing that the peritoneal coat is well turned in and that the sutures and knots are all inside the gut with the exception of the last, for which a Lembert suture at B is substituted. C, Mesentery.

by layer by means of catgut sutures—drainage not being employed except in those cases where the cause of the infective trouble could not be removed—as by this means there are a greater certainty of the wound being properly closed and less danger of the formation of post-operative hernia.

FIG. 11.



A, A, A, Sutures the ends of which are temporarily left uncut. C, C, Mesentery.

Before finally tying the peritoneal sutures it has been my custom for many years past to wash out the abdominal cavity with warm normal salt solution (120° F.). This serves to demonstrate whether or not there is concealed hæmorrhage present and when the water comes away clear the remaining opening in the peritoneum is closed, leaving the abdominal cavity filled with the solution, the object of this being not only to lessen shock but also to prevent the formation of adhesions, to aid in the readjustment of the intestines and omentum to their proper position, and to lessen the danger of septic peritonitis. The attention of the profession was called to this point in the technic as well as to the fact that a 15 volume solution of hydrogen dioxide could safely be used for the purpose of disinfecting the general peritoneal cavity when followed by the use of the saline solution in a paper read before the Society of the Alumni of Bellevue Hospital on Nov. 1st, 1893, entitled "A Case of Contusion and Rupture of the Ileum with Peritonitis without External Wound successfully treated by Cœliotomy and Enterectomy, followed by Circular Enterorrhaphy (Maunsell Method)," and published in the *New York Medical Journal* of Jan. 20th, 1894. Since first employing this technic I can remember having had no case of intestinal obstruction due to post-operative intestinal adhesion, while, prior to the use in this way of the saline solution in the abdominal cavity, intestinal obstruction from this cause, following abdominal operations, was a frequent source of trouble. My opinion that the leaving in the abdominal cavity of a considerable quantity of normal saline solution tends to prevent the formation of intestinal adhesions has been confirmed by the opportunity afforded in a few instances of inspecting the intestinal tract of patients in the course of a secondary laparotomy, undertaken months or years afterwards for other difficulties, upon whom at the first operation numerous intestinal adhesions had been broken up and the technic just described had been employed, and none being found to exist at the time of the second operation.

FIG. 12.

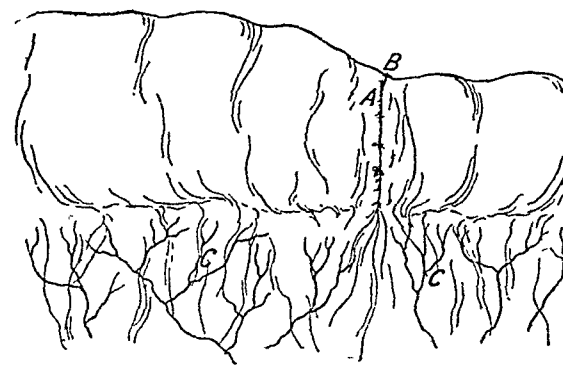


Diagram showing [illegible] of the colon and ileum. A, Line [illegible] union between the ends of the bowe[illegible] coat well turned in and that the knots and sutures are all inside the gut except the last one, at point B, which is of the Lembert variety. C, Mesentery.

In bringing the separated fibres of the muscles together it is important not to pull the catgut sutures too tight, for by so doing the tissues are damaged and healing is retarded; one of the advantages of making the wound in the abdominal wall through either of the recti muscles is that the opening is practically self-closing. Before the cut edge of the fascia is united by sutures, retention sutures of strong kangaroo tendon are passed, and the divided edges of the fascia are then carefully united by sutures of fine chromicised catgut. If this part of the wound is firmly united it takes the strain off the other tissues and prevents all tendency to hernia, especially during the earlier weeks of the convalescence, when the union of the tissues is comparatively weak. When these retention sutures are used the patient may be allowed to turn in bed, if she is uncomfortable and wishes to do so. The edges of the skin are next approximated by means of a subcuticular suture of catgut. When this is satisfactorily done and primary union is secured there is practically no scar. After the wound has been closed in the manner described the tissues are washed with a solution of hydrogen dioxide, known as hydrozone, in full strength which is followed in turn by a solution of equal parts of absolute alcohol and ether. This serves to disinfect thoroughly and to dry the skin and permits of sealing and protecting the wound by means of a solution of celloidin, the formula of which is as follows: celloidin one part; absolute alcohol and ether, each four parts. Great care must be taken not to spread the celloidin solution too widely over the tissues as it has strong contractile powers and continues to draw the tissues together for some time after its application. If the moisture of the skin has been thoroughly removed before the application of the solution, this dressing will prove amply protective to the wound and no other dressing need be employed. Celloidin is not difficult to obtain as of late years it has been

used considerably for imbeddin
in the pathological laboratory
of alcohol and ether is naturall
parent, so that the slightest
the wound is at once noticed If too much of the celloidin solution is employed it may occasion severe discomfort A little experience, however, enables the surgeon to determine how much of the solution to employ If there is cause to fear oozing from the wound it is best not to employ the celloidin dressing, but if it is decided to do so it is best in

kind which attend the use of bandages, which become wrinkled, causing irritation of the skin or even serious bedsores, they also become soiled by urine or fæces thus adding to the discomfort of the patient and also to the danger of possible infection If all goes well the coating of celloidin remains on ten or 12 days, its transparency allowing the wound to be inspected thoroughly from day to day

AFTER TREATMENT

Before the patient is removed from the operating table it has been found advantageous for the purpose of preventing the annoying gastritis which frequently follows the administration of the anæsthetic to wash out the patient s stomach with saline solution and in all cases, except those in which a complete intestinal anastomosis has been performed to place in the stomach before withdrawing the tube four ounces of saturated solution of sulphate of magnesium, it being mechanically difficult for the stomach to throw off so small a quantity of liquid, the result generally being that the patient s bowels act within a few hours, thus lessening the danger of intestinal paresis If during the operation stimulants have not been required to any extent a hypodermic injection of the solution of ergot already mentioned, combined with strychnine and spartein or without either, according to the exigencies of the case will tend to prevent the nausea which frequently follows the administration of the anæsthetic and it will also tend to make the patient c
system These injections
taneously from three
to circumstances, unti
the temperature and pulse become normal The patient is now returned to her bed which has previously been heated by hot water bottles, which should, however, be removed before she is placed in it as even with care blisters and burns are often produced by contact with them even when only moderately heated on account of the patient s sluggish circulation, she should be placed directly within the folds of a blanket When a quantity of hot saline solution is allowed to remain in the abdominal cavity the patient generally leaves the operating table in good condition and with a warm moist skin If the patient s pulse is weak and rapid it is wise to raise the foot of the bed somewhat There
there has been much
ng the operation it is
ything by the mouth
o time If ether has
quantities and in the
generally be little or no vomiting or nausea If the demand for fluids is urgent which is seldom the case when saline solution is left in the abdominal cavity, it is probably due to gastric irritation and can usually be successfully combated by two or three large doses of salicylate of bismuth given at four hours' intervals The comfort of the patient during this early period of convalescence will be promoted by passing a rectal tube three or four inches into the rectum every four hours, leaving it in place for a little while and before its with
10 to 16 ounces of
of 120° F This the
um, as it will tend
but at the same time
will serve as a stimulant to the circulation, kidneys and skin As has already been stated, when an intestinal anastomosis has been effected no cathartic should be placed in the stomach when it is washed out on the operating table or administered by the mouth for 72 hours thereafter, dependence being placed upon the saline enemata, already alluded to, to move the bowels if it is desired to have them act before this time

The occurrence of concealed hæmorrhage which manifests itself during the first 24 hours by a rapid pulse rate and increased rapidity of respiration, a falling body temperature,
should never
the vessels,
them through
directly from
absolute alcohol in which it is preserved and tied first with a single knot and then with a double knot, as pointed out by Frederick of Buffalo, thus prevents the gut from becoming loosened and untied and is the reverse of the usual manner of tying silk when used for a similar purpose If 15 hours after the performance of the operation the nausea following the administration of the anæsthetic continues in spite of the treatment outlined and the patient has not had a movement of, or passed gas by the bowels and her abdomen is beginning to be distended slightly, intestinal paresis should at once be thought of and a seidlitz powder administered in the following manner The contents of the blue paper having been dissolved in a tumblerful of water, the contents of the white paper are dropped upon the surface of the solution at the time the patient is ready to drink it, a warning having first been given to her of the importance of retaining the liquid The advantage gained by the administration of the powder in the above described manner is that the acid dissolves slowly, the solution thus maintaining its agreeable taste till it is swallowed, and also that some of the gas, being generated in the stomach exerts a counter pressure on the intestinal contents and thus helps to overcome the existing reversed peristaltic current and to start it once
wards the anus The
the administration of
it until the bowels act,
for the time is a critical one and in a few hours the patient will either pass safely out of the threatened danger or be beyond hope of recovery If the saline solution is retained by the patient one and a half hours later a tumblerful of hot peptonised milk will often cause the bowels to act freely and when this occurs all danger is usually over, the patient ceases to regurgitate the stomach contents, passes gas by the bowel, and in a few hours is ready to take eight ounces of peptonised milk every three hours Should the patient reject the saline solution I have found it advantageous to administer a second powder within 15 minutes or while the patient is somewhat exhausted by the act of rejecting the first, the importance of retaining the solution being explained again to the patient, who often must be ordered in rather an imperative manner to endeavour to retain it The second effort is usually successful, provided the condition has been promptly recognised and treatment instituted If, however it is not a turpentine enema should be given or one consisting of six ounces of saturated solution of sulphate of magnesium and two ounces of glycerine

The onset of peritonitis is indicated by a gradual but persistent rise of pulse, increased frequency of respiration, a beginning on the second or third day, accompanied by a sharp and persistent pain, gradually increasing in intensity, the body temperature being elevated or not If the pulse rate rises and remains in spite of our efforts above 120 a minute the outlook is generally unfavourable Much may still be done, however, by the judicious use of ergot, strychnine, and other stimulants and food also by the introduction of large quantities of saline solution into the system by the bowel, as well as by promptly recognising and evacuating accumulations of fluid in the abdominal cavity whether purulent or otherwise, the pressure from which alone often causes embarrassment of the lungs and heart, and by keeping the bowels well opened by the daily use of castor oil Infection of the abdominal wound usually manifests itself by the occurrence of a secondary rise of body temperature four or five days after the operation has been performed and should be treated by opening the wound, washing the parts with hydrozone and following this by the
of a wet dressing The best treatment for an
condition to have its edges approximated by
sutures

While the various symptoms described have individually to be considered and their meaning weighed, they also have

been recorded on this point; some have placed the frequency as low as 10 per cent., some as high as 78 per cent. I suspect that this variation depends largely on difference of ideas as to what is to be called enlargement: if easy palpability be the standard, then 45 per cent. of my cases showed splenic enlargement, but including only cases in which the enlargement was at least one and a half fingers' breadth (about one inch) below the costal margin the proportion was 22 per cent. It is quite clear that absence of splenic enlargement weighs very little against the diagnosis of congenital syphilis and mere palpability, I think, is of very little value as positive evidence, for the spleen is often to be felt in infants who are free from all suspicion of syphilis; when, however, the spleen extends an inch or more below the costal margin, especially in an infant under the age of six months, it has, I think, some value as confirmatory evidence.

Eye affections, syphilitic in character, were present in nine out of 60 infants during the first year of life—i.e., in 15 per cent.; all these showed iritis or choroiditis. The value of ophthalmoscopic examination in the diagnosis of congenital syphilis is worth remembering, and in view of the probability that some of the fundus changes are intra-uterine in origin it may be of value in determining treatment even before other evidence of syphilis has appeared.

Laryngitis is one of the most frequent of the early symptoms. It was present in 14 per cent. of my cases. It occurs usually soon after the onset of the snuffles or rash. A hoarse aphonic cry in an infant under the age of three months should always suggest the possibility of congenital syphilis.

Epiphysitis was present in 11 per cent. Some observers have found it even more frequently—e.g., Scherer found it 11 times in 50 cases. The earliest onset in my cases was at two weeks and six out of 11 began during the first three months (six out of Scherer's 11 cases also began under the age of three months). It is one of the causes, if not the only cause, of the so-called "syphilitic pseudo-paralysis" and should always be suspected when an infant during the first half year loses the use of one limb, especially the upper limb, without apparent injury. It might be mistaken for infantile scurvy, but this disease rarely occurs under the age of six months and practically never under four months. Infantile paralysis also hardly occurs under the age of six months and rheumatism can be excluded, for it is almost unknown in infancy. The tenderness and pain on movement will usually suffice to eliminate a paralysis of cerebral origin which, moreover, is seldom limited to one limb as this syphilitic pseudo-paralysis usually is. The history of onset some weeks after birth serves to distinguish from the palsy which results from damage to the brachial plexus during birth. The diagnosis is important, for with mercurial treatment the pseudo-paralysis disappears completely in a week or two; local treatment is seldom necessary beyond protection of the flaccid limb from mechanical injury. But if the syphilitic origin of the condition is overlooked, apart from the suffering entailed to the infant, there is a risk of separation of the epiphysis and also of suppuration, which I have seen occur about the affected epiphysis with undoubted syphilis, perhaps from superadded pyogenic infection of the damaged tissue.

Orchitis, present in five out of 64 males—i.e., in nearly 8 per cent. of my cases—is another symptom which in early infancy is almost pathognomonic of congenital syphilis. The testes are enlarged to two or three times the normal size, are very hard, and quite free from tenderness. The condition may easily be overlooked unless specially sought; its detection is important, not only as an aid to diagnosis but also because early administration of mercury may prevent loss of function in these organs. It differs from tuberculous disease not only in affecting the body of the testis first and chiefly, whilst the epididymis is seldom appreciably affected, but also in being almost always a bilateral affection. In three out of my five cases it began at the age of 12 weeks, a time at which tuberculosis of any sort, and especially of the reproductive organs, is rare.

Brain affections, and indeed nervous affections of any sort, are usually stated to be very uncommon in congenital syphilis. According to my own figures 10 per cent. of children up to the age of 12 years with this disease showed cerebral affection of one kind or another, and even if only infants were included the proportion seemed to be nearly as high. Idiocy, pachymeningitis with cortical sclerosis, hydrocephalus, and cerebral palsies, all these are occasionally due to inherited syphilis, and although no one of them is a frequent manifestation, 8 to 9 per cent. of syphilitic infants show one or another of these cerebral affections.

Anæmia of a very profound degree is sometimes a result of congenital syphilis, most often, I think, towards the end of the first or in the second year. This anæmia may occur after all other manifestations of the disease have disappeared, so that at the time it is the only indication of syphilis. This was impressed upon me some time ago by the case of an infant whom I had treated for syphilis at the age of five months; he passed out of my observation for a time and at the age of about 18 months he was brought again with profound anæmia. I had forgotten the previous symptoms (syphilitic epiphysitis and condylomata) and was in great doubt as to the cause of the anæmia, which was the only symptom except some diffuse thickening of the epithelium of the tongue. The anæmia remained a puzzle until after some months large condylomata appeared at the anus.

The extreme pallor of the face with a brownish-yellow tinge especially about the nose and cheeks is very striking, and may, even in the absence of other symptoms, suggest syphilis, but it is certainly not pathognomonic. This anæmia of congenital syphilis is not associated usually with any special enlargement of the spleen beyond the moderate degree which is common in this disease, and herein lies one difference from the so-called "splenic anæmia" the relation of which to congenital syphilis is still *sub judice* and in which enormous enlargement of the spleen is a characteristic symptom. Examination of the blood shows nothing to distinguish this profound anæmia of congenital syphilis from profound anæmia secondary to other conditions—for instance, rickets. Whether a study of the blood will draw any hard-and-fast line between this syphilitic anæmia and the so-called "splenic anæmia of infants" is still a moot point. Undoubtedly the blood in the latter group of cases presents features which might suggest a disease *sui generis*, but the very close association between this "splenic anæmia" and congenital syphilis and rickets must, I think, make us very cautious in accepting any such view. The *café-au-lait* tint which is sometimes described as characteristic of congenital syphilis differs considerably from the yellowish anæmia. The predominating tint is brown rather than yellow and it is seen, not in well-nourished infants as the anæmia is, but almost always in puny emaciated infants and at an earlier age than that at which the anæmia usually occurs.

Parrot's nodes and cranio-tabes.—The relation of these to congenital syphilis has been much disputed. By some they have been regarded as indubitable evidence of syphilis, by others as a product of syphilis and rickets combined, and by others again as due to rickets alone. If I may simply state my own opinion, formed as the result of some special observation on this point, I should say that neither of these symptoms can be taken as evidence of syphilis; that both of them are found far more often without syphilis than with it; that both of them may be produced by rickets alone; but that both of them are occasionally found with congenital syphilis apart from rickets. Of 100 cases of congenital syphilis under my observation only two showed Parrot's nodes and both these showed rickets also. I think it is quite possible that under the name "Parrot's nodes" two conditions, structurally different, though resembling one another clinically, are confused together, one being the result of syphilis and the other of rickets; at any rate, I can affirm from my own observation that these bosses on the skull show anatomical differences which seem to support this view.

Cranio-tabes has seemed to me to be very rarely due to syphilis; indeed, in examining the heads of syphilitic infants for cranio-tabes I have been struck with the firmness of the bones, which have often seemed to become firm and hard rather earlier than in infants who showed no evidence of syphilis; in my own experience cranio-tabes has been associated most often with laryngismus stridulus and tetany, which are both recognised as rachitic manifestations, and in most of these cases there has been no suspicion of syphilis. I have not time to do more than mention the ulceration of the tongue, the gummata on the bones and in the viscera, and the acute nephritis, which are all occasional symptoms of infantile syphilis.

CONTAGION IN INHERITED SYPHILIS.

I turn now to a very important practical point, the contagiousness of inherited syphilis: Is there any risk

that the infant may give the disease to anyone else? I have already referred to Colles's law which emphasises the extremely important fact that a mother can suckle her child who has congenital syphilis without risk of infection It is hardly possible to exaggerate the importance of this, for the life of a syphilitic infant often depends upon the continuance of breast-feeding, the special frequency of gastro intestinal disorders and marasmus in these infants makes it a matter of vital importance that the mother should suckle it if possible for the full nine months A few cases have been recorded in which a syphilitic infant was supposed to have infected its mother, but in some of these there was a doubt whether the infant might not have had acquired syphilis and in any case the number is so small that such infection must be excessively rare and the risk is so infinitesimal that it can hardly be taken into account when the difference which suckling makes in the chances of the infant's survival is considered But Colles's law, be it remembered, states also that the infant with inherited syphilis although it does not infect its mother will infect a wet nurse, and this raises the broad question as to the contagiousness of inherited syphilis On this point there is a wide difference of opinion I should like to quote first two statements—one from an old writer and the other from a recent "The lesions of congenital syphilis, says Diday "differ from those of ordinary syphilis by an infinitely greater power of contagion And what is at the same time remarkable and deleterious in them is, that they transmit this same property to the person who receives the disease through them [1] In the *Journal of the American Medical Association* of Nov 5th, 1898 is the following remarkable statement by Dr L D Bulkley 'Hundreds and thousands of cases of innocent syphilis have had their origin in innocent babes and too great care can hardly be exercised (He is not speaking of acquired syphilis for he expressly says at the beginning of his paper that his remarks have reference only to hereditary syphilis) "I have myself seen most lamentable instances, and not very recently had a grandmother with chancre within the nostril followed by most severe syphilis with prolonged brain symptoms who had received the infection from a syphilitic grandchild who died of the disease' In the same paper he says 'Multitudes of cases are on record where the disease has been thus communicated to those around by means of the feeding bottle from testing it', and he adds somewhat inconsequently 'I have seen one case where this was believed to be the mode of infection'

Let me refer you now to a careful observer whose Hunterian lectures on infantile syphilis are an admirable contribution to the subject Dr J A Coutts says after excepting one doubtful case, "I have personally never known an instance where syphilis was contracted from an infant with the inherited complaint, and this in spite of many thousands of healthy children and adults having been exposed to infection from cases under my care He mentions also that as a result of special inquiry from 18 medical men connected with children's hospitals he could hear of only eight cases of supposed infection from children with congenital syphilis and four of these eight cases took the form of exceptions to Colles's law and might therefore by some be rejected as unreliable In my own experience I have not met with a single case of infection from an infant with inherited syphilis I have however, heard of two cases in

but it is equally certain that the virulence of such contagion has been grossly and vastly over estimated'

The practical outcome of these observations is clear it is a danger does exist sions condylomata or membranes are present be avoided altogether should wash their hands by habit of moistening the mother's own mouth before giving it to the infant, objectionable and dangerous as it is in any circumstances becomes even more so when children, following the example of their elders, do the same for the syphilitic infant Only a few days ago a mother whose little girl aged about eight years, was born before syphilis appeared in the family told me that this child frequently took the teat from the syphilitic baby's mouth and moistened it afresh in her own Such a practice should certainly be forbidden

[1] Infantile Syphilis Translations of the Sydenham Society p 53

TREATMENT

In the treatment of infantile syphilis there is little choice of drugs the only question is in what form should mercury be administered, in what dose, and for how long I think that there is no form more generally useful for infants than grey powder Combined with aromatic chalk powder a dose of half a grain can usually be given three times a day without causing diarrhœa, but if there is any looseness of the bowels Dover's powder may be given with the grey powder in doses of one eighth of a grain for infants over three months of age, and one-fourth of a grain at the age of six months I have also used the liquor hydrargyri perchloridi but I think it is more liable to cause diarrhœa, an infant a month old can take three minims and an infant six months old can take from five to ten minims three times a day Inunction of unguentum hydrargyri may be used either alone or in severe cases in addition to the internal administration, a piece of the size of an average green pea—a rough measurement of 15 grains—is gently rubbed over the abdomen or the inside of the thigh or arm at night and left covered over with a flannel bandage until the following morning when it is washed off, this to be repeated every night unless the skin shows signs of irritation as it occasionally does By one or other of these means even in the most severe cases an infant can rapidly be brought under the influence of mercury and I know of no condition in which there is anything to commend the intramuscular or intravenous injections of iodine or mercury which have recently been advocated for infantile syphilis Such methods however suitable they may be for adults are in my opinion wholly unsuitable for the treatment of the disease in infants, they involve an absolutely unnecessary risk of troublesome inflammation Iodides are by no means useless in the treatment of infantile syphilis with *epiphysitis* and *gummata* which may occur very early in infancy, iodides should be used internally in addition to mercury and I fancy that in other manifestations of syphilis in infancy iodides may be used sometimes with advantage The duration of mercurial treatment is a point of much importance The disappearance of symptoms is, I think no indication for discontinuing treatment, there are cases in which under mercurial treatment all symptoms disappear in three or four weeks but if mercury be discontinued so soon symptoms will almost certainly recur Treatment with mercury should be continued for at least six months after the disappearance of active symptoms of syphilis and where symptoms tend to recur when treatment is omitted it may be necessary to continue it for a year or more

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ABSTRACT OF

The FitzPatrick Lectures

FOR 1904.

Delivered before the Royal College of Physicians of London on Nov 8th and 10th, 1904

By JOSEPH FRANK PAYNE, M D Oxon,
FELLOW AND HARVEIAN LIBRARIAN

LECTURE II [1]

Delivered on Nov 10th

RICARDUS ANGLICUS AND THE TEACHING OF ANATOMY IN THE MIDDLE AGES

MR PRESIDENT AND GENTLEMEN —We find occurring in the medical history of the thirteenth century and attached to a good many old manuscripts in our libraries the name of one *Ricardus Anglicus*, Richard the Englishman, and we naturally desirous of finding out all that can be known about our countryman and of displaying his work and personality as clearly as we can But here we encounter the same difficulty as in the case of Gilbert—that is the ambiguity of a Christian name We read of *Magister Ricardus Ricardus*

[1] An abstract of Lecture I was published in THE LANCET of Nov 12 h 1904 p 1327

Salernitanus, *Ricardus Anglicus*, and *Ricardus Parisiensis*, so that evidently some discrimination is necessary. On investigation it appears that the four Richards are reducible to two persons—an earlier and a later. The earlier, called sometimes Salernitanus, who was in some way connected with the school of Salerno, the Ricardus senior of Gilles de Corbeil, the honoured magister and probably actual teacher of Gilbert, was the writer of numerous medical works (one of them a treatise on anatomy), some of which have been wrongly attributed to Ricardus Anglicus. He was a Frenchman apparently by nationality and a teacher at Montpellier though having had some earlier connexion with Salerno. He must have lived and flourished at the end of the twelfth century though he probably lived on into the thirteenth, but the dates of his birth and death are not known.

The later Richard was our *Ricardus Anglicus*, called also *Parisiensis* because he at one time lived at Paris. As in the case of Gilbert, the name Anglicus implies not only that he was an Englishman but that he lived or was well known abroad. The main outlines of his life are clearly marked out on unquestionable evidence. He was born at Wendover and was known as Richard of Wendover. One would like to adopt and to use this name exclusively, were it not that there was another contemporary Richard of Wendover, Bishop of Rochester. It has been suggested that Richard studied at Oxford but of this there is no evidence. He was a canon of St. Paul's and the official records still show the names of the different prebends that he held successively. His contemporary Matthew Paris, the monk of St. Albans and well-known chronicler, who died only seven years after Richard, gives us further particulars about him. He states that Richard was physician to the Pope Gregory IX. (though when appointed he does not say) and retained his post till the death of the Pontiff in 1241. The Pope was much attached to his physician and on his death-bed gave him a much valued possession, an ivory crucifix containing precious relics. This crucifix Richard bequeathed to the Church of St. Alban, so that Matthew Paris must have been well acquainted with the circumstances. Next, Du Boulay, or Buleius, the historian of the University of Paris, tells us that Richard of Wendover, canon of St. Paul's, London, the physician, made himself a great reputation among several of his countrymen who were professors at that time. Now "professor" had not then precisely the formal meaning it has now but at all events it meant teacher. Richard died in 1252, as is confirmed by official records. There is nothing doubtful or uncertain about all this. The only point not quite clear is when Richard taught at Paris.

There ought not to be any confusion between the two Richards, and there is not, except as to their writings. Both wrote books, and each of them, as it happens, wrote a book on anatomy and some kind of book called "Practica," besides others, which are assigned generally to Ricardus, with or without the suffix Anglicus. But his name is often applied very loosely and inaccurately, scribes and cataloguers having been accustomed to suppose that any medical work by Ricardus must have had the Englishman for its author.

The MSS. of Ricardus at Paris were carefully examined and read by M. Littré more than 50 years ago. He found that some of these works must have been written in the twelfth century and therefore could not have for their author Richard of Wendover who died in 1252. About others he was uncertain or gave no opinion. But with our present knowledge of the medical literature of those times there can, I think, be little doubt that most of these books had nothing to do with our Richard of Wendover; certainly seven or eight out of ten would be excluded. I have examined by reading as far as possible and by having some copies made several MSS. in the British Museum and the Oxford libraries and have not as yet come upon any MS. which can be certainly referred to Richard of Wendover; all that I have seen are clearly the works of the earlier Richard.

In this difficulty of finding the genuine works of our Richard we receive unexpected aid from Vienna. An able and learned investigator of the history of mediæval anatomy, the Ritter von Töply, lately appointed professor of the history of medicine in the University of Vienna, has published in a beautiful form from a manuscript in the Palatine library a Latin treatise on anatomy which bears the name of Ricardus Anglicus and which he regards as the work of our Richard of Wendover. Now the mere fact that the name Anglicus is inserted upon the MS. is, of course, not enough to establish the authorship beyond question, since we have seen how loosely names are applied, and that this particular name is often given quite erroneously. But Professor von Töply gives corroborative evidence derived from the style and contents of the work which correspond to the time of Richard of Wendover. They will be discussed later; but in anticipation I must say that it appears to be just such anatomical teaching as we should expect to have been given at Paris in the middle of the thirteenth century. It contrasts strongly with the anatomy of the earlier Richard formerly spoken of. There are several MSS. of this in the British Museum and at Oxford, and one of those in London bears the *Ricardus Vetulus*, evidently the same as . . . . mentioned in my last lecture as spoken of by Gilles de Corbeil and probably the teacher of Gilbert. The contrast of these two works, of different schools and different dates, is very instructive and will be considered in the course of some remarks on the history of anatomical teaching.

We now pass on to some notes on the History of Anatomical Teaching in the Middle Ages. "Teaching" only is regarded and not the history of anatomy which would be far too large a subject. It is proposed to illustrate this by quoting several documents relating to anatomical teaching and then to show the changes which it underwent. In this enumeration reference will be made to the anatomy of the earlier Richard and to the anatomy of Ricardus Anglicus as published by Ritter von Töply, and thus the true character of these treatises will be shown by comparison.

ANATOMICAL TEACHING AMONG THE GREEKS.

In early times anatomy was taught in Greece to the children of "Asclepiad" families, the real or supposed descendants of Asclepios, with whom medicine was a hereditary craft. Afterwards strangers as well as members of the family were taught the craft, and it was then, according to Galen, that books of anatomy were first composed. At a later time anatomy was very systematically studied in the School of Alexandria, being taught by Herophilus, Erasistratus, and others whose works have perished. At one time living persons (criminals under sentence of death) were subjected to dissection but this barbarous practice was given up and dead bodies were dissected. This practice also was afterwards forbidden and in the time of Galen dissection was carried out in Alexandria only on the bodies of brute animals, such as apes and pigs. Galen himself had been taught anatomy when he was young and kept up the study with enthusiasm in mature life. He dissected chiefly apes and recorded his results in several books. These anatomical books were very imperfectly known in the Middle Ages, the only one which was translated into Latin was the treatise "On the Use of Parts," which was intended to show the wisdom of the Creator in adapting all parts of the body to their respective uses. It was rather a treatise on Natural Theology than Anatomy and not intended to teach the science to students. The descriptions of parts are often very vague or even allusive, taking for granted some knowledge. This was the only direct source of Galenic anatomy in the Middle Ages, though anatomists knew something more of the doctrines of Galen and Aristotle through the Arabian books translated into Latin.

Three periods may be recognised in the anatomical teaching of the Middle Ages: 1. The Salernitan Period when anatomy was taught in the school of Salerno by the dissection of pigs. This period goes up to 1200. 2. The Arabist Period, when what was called human anatomy was taught solely by books and lectures without dissection. The basis of teaching was the Arabian anatomical books representing the doctrines of Galen and partly of Aristotle. This period includes, broadly, the thirteenth century. 3. The Period of Human Dissection introduced by Mondino in 1315 and extending up to the time of Vesalius. Each of these periods may be illustrated by selected documents showing the kind of teaching.

FIRST PERIOD.

The first work on anatomy produced in the school of Salerno was the "Anatomy of the Pig" by Copho, junior, written probably at the end of the eleventh century after the introduction of some knowledge of Arabian anatomy by Constantine in the work called Pantegni, a translation of a book by Haly Abbas, an Arabian physician. This tract is a short description of the dissection of a pig, with directions how to find and to display the most important parts. It

contains only two Arabic anatomical terms *arbus*, the omentum, and *siphac*, the peritoneum It begins thus —

Copho on the anatomy of the pig —"Since the composition of the internal members of the human body was entirely unknown, the ancient physicians, and especially Galen thought that the parts might be made evident by the anatomy of the internal members of brute animals And while certain brute animals is the ape, are found to be like us in the external parts, none of the internal parts are found to be so like as those of the pig and therefore we have decided that anatomy should be studied in them Now anatomy is correct division and is done thus You must place the pig on its back, and cut it through the middle of the throat and then the first thing that comes into view is the tongue, which is attached on the right and on the left to certain nerves which are called those of motion And these nerves as they come from the brain to the lung are turned aside to the tongue and by them the tongue is moved so as to make sounds, &c"

Another anatomical work of the school of Salerno is the *Demonstratio Anatomica* contained in a Salernitan manuscript preserved at Breslau and printed in the Collectio Salernitana of de Renzi After a general introduction the directions for dissection begin as follows —' Let a pig be killed not as some do by piercing the heart with a steel instrument by which much blood is drawn to the organs of breathing and they cannot be so well seen, but having cut its throat let it be hung up by its hind feet, with the head hanging down so that nearly all the blood may flow out When this is done it must not be taken down [?left] lest, the body becoming cold the channels of the nerves veins, and arteries should contract and they could not be easily distinguished Now the opinions of the ancients respecting anatomy were conflicting and diverse For some say that anatomy was practised on dead animals, but they used to assert, on more mature consideration, that living animals were preferred for dissection and according to Galen this opinion prevailed because the movements of particular parts are more clearly seen But this being done and the pig being placed upon its back, let the lower knee be drawn aside a little from the upper, and then comes into view the tongue which is the organ of taste and speech composed of soft flesh and something like a sponge The tongue in these animals is too long and flabby and cannot be moved in the upper part for the utterance of *vowels* though it can be used below for the utterance of *mutes* [consonants] and this is one reason why it [the pig] cannot talk &c Then let a small incision be made above the throat and certain muscles are seen which are the means of voluntary motion and by a similar incision at the side between the skin and flesh certain other muscles are seen by which voluntary movements are effected

It is impossible to discuss the rest of the "Demonstration" which gives rough but generally intelligible directions for the dissections necessary to exhibit the stomach, intestines, and other abdominal organs, as well as the organs of generation in both sexes with some account of their structure and remarks upon the uses of each part The head and the anatomy of the eye are briefly described it is much more detailed than that of Copho and was evidently written later

The next document brought forward is a short tract on anatomy called the *Anatomia Magistri Ricardi* This has already been printed at Berlin indeed twice For the reasons, already given there can be no doubt that as suggested by Ritter von Töply it was written by the Magister Ricardus who was known to Gilbert at Salerno and whom we place at the end of the twelfth century Several MSS of this anatomy contained in the British Museum and the Oxford libraries agree in the main but differ rather considerably in the first part or introduction which is the most interesting portion This introduction is here given from the MS which has the fullest text

anatomy, wherefore we must consider what anatomy is and why it is so called and in which animals it was the custom to practise it among the ancients and in which among the moderns and of their [its] kinds and divisions The word anatomy, as we know from Galen, means right or correct division of the parts and comes from *ana* meaning correct and *thomos*, meaning division hence correct division of the part, that is done in an orderly way Now it was the custom among the ancients to practise anatomy both on the bodies of the living and on the bodies of the dead They [the anatomists] went to the Prince and begged for those who were condemned to death First tying their hands and feet they made their incisions in the organs of the soul [nervous system] as being the most important parts of the body such as the head in order to get a complete knowledge of the arrangement of the skull of the pia mater and the dura mater, and the character of the nerve [nerves ?] arising from them Next they made their incisions into the organs of breathing in order to get a complete knowledge of the position of the heart and the entrance of nerves veins and arteries In the same way they went to the organs of nutrition, after this finally they went on to the generative organs as being less important This was the way in which it was usual to practise dissection on the bodies of the living The account goes on to say that the dead bodies were prepared for dissection by maceration in running water but at the time of the writer dissection was practised quite adequately on the bodies of pigs

THE SECOND PERIOD TEACHING OF HUMAN ANATOMY WITHOUT DISSECTION

For some reason the dissection of pigs seems to have gone out of fashion and for about a hundred years anatomy was taught by lectures and books on the basis of the Arabian anatomical literature derived from the Greek The anatomy was much more elaborate than that of the earlier period The best example of this period is found in the work of *Ricardus Anglicus* as brought to light and published by Ritter von Töply Though the name alone would not establish the authenticity of the work, the style and doctrines are just what might be expected from a teacher at Paris in the middle of the thirteenth century It refers to several Arabian writers Avicenna Haly Averroes, and contains many more Arabic anatomical terms than the older book Also the style is that of the scholastic or dialectical period The Anatomia begins as follows

The Anatomy of Richard the Englishman — It is necessary for the physicians who are anatomists to know for certain that the human body is constructed to be the support of movements and of diverse operations and hence is composed of many and diverse instruments [organs] To it is joined a noble part pertaining to the soul by which noble powers and many kinds of faculties exercise influence over it and by the activities of these it is governed and maintained in being and is preserved from corruption and from a rapid fall [or decay] But since the activity of no faculty can be fulfilled except by organs fully adapted for the purpose there is required adaptation and preparation of organs of many shapes to regulate the fabric of the human body, by which the faculties are brought into action and produce the effects which they intend Wherefore my operation which has not manifold uses is not long preserved nor indeed does it come into being This is only a sample but gives a fair idea of the book After Ricardus Anglicus came Henry de Mondeville another teacher of the same school in anatomy though he was also a practical surgeon He lectured on anatomy at Montpellier about 1304 He did not dissect but was the first to use pictures or diagrams as an aid in teaching anatomy and also the model of a skull Part of his book was translated into English in 1392

THE THIRD PERIOD OF ANATOMICAL TEACHING (1215 TO 1543) REVIVAL OF HUMAN DISSECTIONS

A few years after de Mondeville's lecture and the composition of his book on surgery the most important advance in the teaching of anatomy was made by the introduction of demonstration from the dissected subject The credit of this innovation belongs without doubt to the University of Bologna and the first teacher by actual dissection was Mondino de Luzzi usually known as *Mundinus de Leuitis* who made his first recorded public demonstration of anatomy in the year 1315 and died in 1326 There is evidence of the human body having been dissected or at least opened after death (for the distinction between a post-mortem examination and an anatomical dissection was not clearly recognised) at Bologna before 1315, but the dissections had nothing to do with the actual teaching of anatomy to students Mondino professed to demonstrate from nature the actual structure of the parts but seems to have been able to see little or nothing more than what was laid down by the Arabian authors as the anatomy of Galen and therefore recognises some features which belong to the anatomy of brutes and are not strictly human He left

no figures, but when the art of wood-cutting was introduced in the fifteenth century some rude woodcuts appeared which represent Mondino and his teaching. One shows the professor sitting in a chair while a prosector makes the dissection in which students took no part. Others represent the ideas entertained at the time respecting the anatomy of internal organs but are not actual copies from nature. The most important of the successors of Mondino at Bologna was Jacobus Berengarius Carpus who brought out a new edition of the Anatomy of Mondino with a commentary in 1521 and also a short introduction to anatomy of his own. These works are chiefly remarkable for their illustrations, which were the best anatomical figures published up to that time. His representations of the external anatomy of the muscles are accurate and show artistic feeling. But when he gives a figure of the heart and the aorta it departs widely from the human standard and shows how much even after 200 years of human dissection men were influenced by preconceived ideas.

CLINICAL OBSERVATIONS ON THE ANÆSTHETIC EFFECTS OF METHYL OXIDE, ETHYL CHLORIDE, AND THE SO-CALLED "SOMNOFORM."

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I.—INTRODUCTION.

THE present contribution to the subject of general anæsthesia is the outcome of work upon which I have been intermittently engaged during the past year at St. George's Hospital. The anæsthetics with which it specially deals are (1) methyl oxide or methyl ether; (2) ethyl chloride; and (3) the so-called "somnoform," a commercial preparation which has been extensively advertised, and which it is stated consists of 60 parts of ethyl chloride, 35 parts of methyl chloride, and five parts of ethyl bromide.

I am glad to have this opportunity of expressing my best thanks to those who have so kindly helped me in this investigation. I am specially indebted to Mr. J. Addyman Gardner, F.I.C., lecturer on chemistry at St. George's Hospital, for providing me with sufficient quantities of pure methyl oxide to enable me thoroughly to test the anæsthetic properties of this body. I propose to give below in full Mr. Gardner's remarks on the preparation and chemical properties of methyl oxide. I am also much indebted to Dr. G. A. Buckmaster, Dr. J. Blumfeld, Dr. L. Powell, and Mr. Lawrence Jones for valuable assistance.

Ethyl chloride, "somnoform," and certain other mechanical mixtures similar in type to the last-named preparation having recently proved themselves to be comparatively safe agents for the production of unconsciousness, the question as to the most suitable anæsthetic for brief surgical operations in which complete muscular relaxation is not essential has acquired considerable interest. Before these bodies made their appearance in the field of practical anæsthetics most brief operations were, at all events in this country, performed under nitrous oxide, administered either in its pure state or with air or oxygen. Where it was impossible or impracticable to obtain this anæsthetic a small quantity of chloroform or of the A.C.E. mixture was generally used. But with fresh additions to our resources it is obviously necessary to reconsider the lines upon which we have been proceeding and to decide what places should be assigned to ethyl chloride and its mixtures in the already full list of general anæsthetics. Is it possible completely to replace nitrous oxide by ethyl chloride or one of its mixtures? Can we obtain by means of these portable and readily vaporisable agents results as good as those obtainable with the less portable, but well tried, laughing gas? At the present moment both ethyl chloride and "somnoform" are being very largely, perhaps too largely, used, not only in dental, throat, and nose operations, but in minor surgery generally. Those of us who are specially identified with this department of practice are constantly being asked whether these agents are safe and trustworthy; whether ethyl chloride produces better results than "somnoform," or "somnoform" better results than ethyl chloride; whether they are suitable for this or that case; whether this or that inhaler is the best, and so forth. The fact is that the circulation throughout the profession of misleading pamphlets and advertisements has had a somewhat confusing effect.

Directly it became clear that we had in ethyl chloride a not unpleasant, a rapidly acting, and an exceedingly portable and a comparatively safe anæsthetic, a widespread movement in favour of the new drug and of mixtures, the action of which depended chiefly upon the ethyl chloride they contained, began to manifest itself. In hospital practice, and especially in dental and throat operations, there was something to be said in favour of ethyl chloride as opposed to nitrous oxide. Certainly from some points of view the anæsthesia obtained by the former agent was of a better type than that obtained by the latter. In dental surgery, for example, the available anæsthesia period, after a full dose of ethyl chloride, was distinctly longer than that from nitrous oxide. Moreover, the great portability of the ethyl chloride tubes was a distinct advantage, especially in country practice, whilst the apparatus required and the method of administration were as simple as could well be wished. *As regards the safety of ethyl chloride as a general* anæsthetic—that is to say, its death-rate when administered in varying circumstances—this was an unknown quantity. It seemed, however, clear that, as compared to other anæsthetics, it was when administered pure comparatively safe. When mixed with ethyl bromide, as in "somnoform," an additional risk of no small proportions was incurred. Two fatal cases have to my knowledge taken place in connexion with "somnoform" and although I have employed this mixture with the object of testing its effects I am not disposed, after the results to be described below, to use it again in practice.

The cases to which I shall refer are 50 in all, a number which at first sight may appear to be too small to entitle one to draw any useful conclusions. But as I have in each of these cases taken great care not only as regards the anæsthetic or mixture actually administered, but as regards recording the phenomena observed and subsequently analysing and classifying these phenomena, I feel that the material I have obtained is sufficient for the purpose. Experience has convinced me that our knowledge concerning any particular anæsthetic or method of administration is more likely to be increased by carefully conducting and recording a few cases than by anæsthetising a large number of patients without attention to detail. In each of these 50 cases a certain "method of administration" was employed, by which I mean a plan or procedure capable of being described in so many words and repeated in subsequent cases—not a haphazard administration which cannot be faithfully reproduced. In each case a definite percentage or a definite quantity of the anæsthetic was taken; the temperature of the room and the barometric pressure were, when necessary, recorded; the patient was examined; a note as to food, &c., was made; the clothing was loosened; and a metronome, placed in the care of an assistant, was adjusted to ring every three seconds during the administration and operation periods. When everything was in readiness the administration was begun, one assistant counting aloud the bells of the metronome, whilst another recorded in a specially ruled book the effects which I described from time to time. In each case a mouth-prop was inserted the patient was instructed to breathe through the mouth and a dental operation was performed. In addition to the records made during the inhalation and operation periods notes were also made as to the after-effects, the patient's sensations and opinions, and other points. I give one of the 50 cases in full in order that a correct idea may be obtained as to the plan of note-taking.

CASE 46. JULY 4TH, 1904. 1 P.M.

Weather.—Fine and warm.

Name.—R. D., aged 32 years.

Description.—Short and fair; good heart sounds and chest-expansion.

Diet.—Tea only at 8 A.M.

Method.—5 cubic centimetres of ethyl chloride ("Kelene") to 3000 cubic centimetres of air, administered as described in method 5, Table II.

Operation.—Three teeth extracted.

Operator.—Mr. Mummery.

Metronome Set to Ring every Three Seconds.

Inhalation period.		Available anæsthesia period.	
Bells.	Symptoms.	Bells.	Symptoms.
1		1	
2		2	
3	Ethyl chloride being tilted into bag.	3	
4		4	No reflex movement.
5		5	
6		6	One tooth out.
7		7	
8		8	Perfectly tranquil.
9	Good regular breathing.	9	Second tooth out, slight movement.
10		10	
11		11	Third tooth out.
12		12	Hand moved up.
13	Shuts eyes when asked.		
14	Perfectly tranquil.		
15			Inhalation = 81 seconds. Available anæsthesia = 36 seconds. General result. Arbitrary numerical value = 3.
16	Does not open eyes when asked.		
17	Breathing quicker and deeper.		
18			*Remarks.*—No phonation throughout. Immediate re-
19			
20			
21			
22	Tendency to retch.		
23			
24	Snoring.		
25			
26	Slight clonus.		
27	Administration discontinued.		

I may point out that the absence of any note against the numbers in the inhalation or operation periods indicates that there was nothing at the moment to record. Thus in Case 46 the 1, 2, 5, 6, &c., indicate that when these bells of the metronome rang the patient was quite quiet and that there was nothing to record. The same remark applies to 1, 2, 3, &c., in the operation period.

Whenever a patient had to return on a subsequent occasion for a further operation and when such a course could be followed without in any way prejudicing the patient's interests, a different anæsthetic or a different method of administering the same anæsthetic was chosen. In this way valuable information was obtained. Indeed, it may, I think, be accepted as a fact that, given the same patient, the same preparations as to diet, &c., the same anæsthetic, the same method and length of administration, and the same atmospheric conditions the same result will, with the rarest exceptions, be obtained. I say with the rarest exceptions because I do not deny the possibility of the patient's mental state, which obviously may be widely different on different occasions, influencing the result. But it is a mistake to regard this psychical factor as the most common cause of differences displayed by patients when anæsthetised on different occasions under apparently identical conditions. A careful investigation of these conditions will generally lead to the detection amongst them of one or more which were not precisely the same on the two occasions. For example, a heavy meal before the first administration, an empty stomach on the occasion of the second, absolute coaptation of the face-piece at the first administration, slight want of this coaptation at the second; oral breathing on the first occasion, nasal breathing on the second; these or similar differences are, as a rule, amongst the true causes of differences in results. In previous investigations I have taken every opportunity of anæsthetising the same patient on different occasions and have almost invariably found that provided
attended to in order to make
results have been obtained, wh
tion has been inadvertently or purposely introduced into the administration I have obtained results which differed in certain respects from those formerly observed and noted. I therefore did my best in this investigation to obtain as many of these "multiple administration" cases as possible and was very fortunate; in fact, there was one patient whom I anæsthetised on no less than five separate occasions, administering a different anæsthetic or employing a different method on each occasion. These multiple administration cases will be discussed in a special section below.

With the object of facilitating the comparison of my 50 cases one with another I have devised a system by which each case has received an arbitrary numerical value indicating the kind of general result which was obtained. If, as in this series of cases, a certain degree of anæsthesia be induced, the anæsthetic be then withdrawn, a certain operation be performed and full and careful notes be taken on the lines above mentioned it will be found possible by the simple process of appraising the symptoms of the patient during the inhalation, operation, and recovery periods, to put a kind of value upon each case as a whole. In this way one may compare one anæsthetic with another anæsthetic, the method remaining the same; or one may compare one method of administering a particular anæsthetic with another method of administering the same anæsthetic. In either case, as I have already mentioned, the comparison is of the greatest clinical value when the patient remains the same. Working on these lines I have appraised the symptoms of each of my 50 cases and have thus been able to give to each case an arbitrary numerical value (A.N.V.) according to the following scheme:—

Ideal, or excellent, arbitrary numerical value (A.N.V.)			...	= 5
Good	,,	,,	...	= 4
Fair or moderate (i.e., neither good nor bad)	,,	,,	...	= 3
Unsatisfactory or bad	,,	,,	...	= 2
Very bad (or failure)	,,	,,	...	= 1

2. METHYL OXIDE OR METHYL ETHER.

I have on more than one occasion during the past ten years endeavoured to obtain sufficient quantities of this substance to enable me to test its anæsthetic properties. It was not until a few months ago, however, that I was successful. I had always been much impressed by the statements made by the late Sir B. W. Richardson concerning his experiments with methyl oxide dissolved in ordinary ether and I intended when an opportunity should present itself to investigate the effects of the pure substance. As far back as 1868[1] we find accounts of Richardson's experiments with methyl oxide dissolved in ether to saturation. He does not seem to have studied the anæsthetic properties of the pure gas—in fact, not only in his experiments upon lower animals but in his administrations to the human subject varying and unknown proportions of ethylic ether vapour must have been inhaled with the methyl oxide. So far as I can ascertain no researches have been conducted with methyl oxide itself.

The following short account of the chemical properties of methyl oxide has been kindly furnished by Mr. Gardner:—

Methyl oxide, or methyl ether, $\begin{matrix}CH_3\\CH_3\end{matrix}\Big\rangle O$, is the lowest member of the homologous series, of which ethyl ether is the best known representative, and bears the same relation to methyl alcohol that ethyl ether does to ethyl alcohol.

$CH_3—O—H$. $CH_3—O—CH_3$.
$C_2H_5—O—H$. $C_2H_5—O—C_2H_5$.

[illegible]
–23
pressure [illegible]

–30° C.	576·54	millimetres.
–20° C.	872·00	,,
–10° C.	1306·63	,,
0° C.	1879·02	,,
+10° C.	2623·97	,,
+20° C.	3566·01	,,
+30° C.	4777·99	,,

The gas can therefore readily be condensed to the liquid state by pressure at ordinary temperatures. The heat of combustion (for one molecule) at constant pressure is 344·2 calories, from which, according to Berthelot, the heat of formation from amorphous charcoal is 56·8 calories. Meth
[illegible]

[1] See Medical Times and Gazette, May 30th, 1868, p. 561. See also Medical Times and Gazette, June 6th, 1868, p. 603; Asclepiad, vol. ii., p. 270; and Asclepiad, vol. iv., p. 135.

forms a similar compound with concentrated sulphuric acid, one volume of which dissolves 600 volumes of the methyl ether with considerable evolution of heat. This compound is unstable and is decomposed by water with the liberation of methyl ether.

In order to obtain the substance in quantities sufficient for these experiments the method of Erlenmeyer and Kriechbaumer (Berichte der Deutschen Chimischen Gesellschaft, 7, 699) was at first adopted. 1·3 parts of dry pure methyl alcohol were gradually mixed with two parts of concentrated sulphuric acid and placed in a flask of three litres capacity fitted with a thermometer and a reversed condenser. The flask was placed on a tripod and gauze and gently heated by means of a rose burner. The gas evolution commenced between 90° and 100° C. and as the experiment proceeded the temperature of the liquid gradually rose but was not allowed to rise above 140° C. By regulating the temperature a steady evolution of methyl ether was easily attained. When the gas evolution slackened the liquid was allowed to cool and a further quantity (0·4 part) of methyl alcohol was added and the heating continued as before.

After leaving the condenser the gas was purified by passing through a flask containing pumice and concentrated potash solution and finally through two large bottles filled with granulated soda-lime. The gas thus obtained, which had a pleasant ethereal smell, was absorbed in a litre of pure concentrated sulphuric acid contained in a vessel cooled by ice water. The gas was very rapidly absorbed with a considerable heat evolution. The liquid eventually obtained was deep brown in colour and nearly double the bulk of the original acid. The gas was recovered for use by dropping the sulphuric solution into an equal bulk of water. This method of storing the gas did not, however, prove very satisfactory, as a considerable amount of decomposition took place on treating with water, tarry matter being produced and the gas was contaminated with sulphur dio[illegible] after purification by passing through potash and [illegible] ether had not quite such a pleasant smell as bef[illegible] sulphuric acid and had a slightly more irritant action when inhaled.

Ultimately it was found best to dispense with the absorption by sulphuric acid and the methyl ether, after purification by passing through potash and soda-lime, was collected in a large rubber bag, from which it was pumped by means of a small motor pump into an iron cylinder of the kind used for storing nitrous oxide. By not pushing the action in the heating flask too far and keeping the temperature *below* 140° a very pure gas could easily be obtained. It was not found necessary to use *pure* methyl alcohol. Rectified methyl alcohol dried over lime proved quite satisfactory.

Having thus obtained by the kindness of Mr. Gardner sufficient quantities of liquefied methyl oxide I prepared in a large rubber bag a mixture containing 10 per cent. of the anæsthetic gas and 90 per cent. of air. Although the smell of pure methyl oxide as it issues from the retort of the chemical laboratory is distinctly fruity and pleasant, reminding one somewhat of amyl nitrite, it has little or no odour when greatly diluted with air. This 10 per cent. mixture, in fact, was in taste and smell not unlike nitrous oxide gas. Two hours after a light luncheon I took one full inspiration of this 10 per cent. mixture through an ordinary valved stopcock, the corresponding expiration escaping. No cough was excited, no general effect followed, and there was no headache or discomfort after. I next tried two full breaths with identical results. My pulse immediately after was 82 and quite regular. I then took four full inspirations of the mixture, all expirations escaping as before, and beyond a slight feeling of flushing of the face no effects followed. Six full inspirations were next taken and produced a slight feeling of warmth in the epigastric region but no further effects, from which I argued that the mixture was too weak to be of any use. I therefore prepared a 20 per cent. mixture and proceeded as before. The taste was not particularly pleasant, being rather acrid. One full inspiration produced no effect. I next took three full inspirations. About 40 seconds after the third inspiration I experienced a drowsy feeling but no other sensation. I next took five full breaths with practically the same result. Beyond the fact that two minutes later I found a difficulty in expressing myself accurately no effects were noticed. I therefore prepared a 30 per cent. mixture of which I took three full breaths. This mixture seemed rather pungent and induced two coughs. Beyond feeling a glow over my body about three minutes later no effects were produced. I therefore took six full breaths of this 30 per cent. mixture and found, for the first time, that a distinct effect was produced. The general sensations were almost identical with those obtainable by nitrous oxide, except that the taste was not so agreeable. (I may here say that this particular methyl oxide had been obtained from its solution in strong sulphuric acid and I think there may have been slight impurities in it.) I did not completely lose consciousness, but I passed into a drowsy state in which I had to exert self-control to prevent myself behaving irrationally. Having often inhaled nitrous oxide in similarly increasing quantities I felt certain that this 30 per cent. mixture would, if pushed a little further, destroy consciousness. Five minutes after the inhalation of these six full breaths I experienced an unpleasant after-taste and some headache.

On a subsequent occasion I inhaled a mixture of methyl oxide and air containing about 33⅓ per cent. of methyl oxide which had been prepared by the direct method—i.e., it had not been passed into sulphuric acid and liberated. The mixture was certainly more pleasant than that previously respired but one full breath was somewhat pungent and induced a cough. I therefore diluted the mixture till it contained only about 20 per cent. of methyl oxide and then inhaled 12 consecutive breaths. A pleasant sensation resulted; I experienced a warmth about the face and lips but consciousness was unimpaired. It seemed that mixtures sufficiently dilute to be pleasant were not capable of rapidly destroying consciousness, whilst those which were rich enough in methyl oxide quickly to render one unconscious had the disadvantage of being pungent. I therefore determined to try in a few clinical cases a fairly strong mixture and to prevent the pungency of such a vapour by admitting it gradually. Thus in Case 13 (the first in Table I.) a 1 in 2 mixture of methyl oxide and air was employed, the administration being conducted as described in the table (Method 1). No cough was induced; there was no resistance, excitement, or struggling; the breathing was fairly regular; there was occasional swallowing; the pulse was good and regular, being 116 to the minute 42 seconds after commencing the inhalation; the pupils were somewhat dilated; the colour was unaltered; consciousness was lost in about 144 seconds; there were very slight reflex movement and phonation when the operation began. The inhalation lasted 201 seconds and the available anæsthesia 78 seconds. The patient said she "felt she could not breathe" during the induction; her condition afterwards was somewhat unusual. There was a sudden awakening whilst in the chair, but she remained dazed, sleepy, and depressed for about 20 minutes after. She complained of pain over and below the cardiac region, of a feeling of faintness, and of inability to walk. Ten minutes after the operation there was some general tremor; there were also some headache and slight nausea but no vomiting. The pulse and colour remained good. In the next case (No. 14) the same method was employed, but a 50 per cent. mixture was used. The breathing at first was good and regular; there was no excitement; the pupils were dilated; at the end of a minute there were some swallowing and holding of the breath; the colour was good; and consciousness persisted till nearly the end of the administration, which lasted 153 seconds. There was much reflex movement during the operation; the anæsthesia, which was of a light form, lasted about 51 seconds; and giddiness was experienced afterwards. In Case 15 the same method was employed. Cough occurred during the induction, with slight phonation and movement of arms. During the operation there were more movement and considerable phonation. The administration lasted 117 seconds and the anæsthesia 30 seconds. There was nausea after. In Case 16 to-and-fro breathing took place throughout with the result that consciousness was lost much earlier—in about 63 seconds. There was no resistance, excitement, or cough. After 99 seconds' inhalation the pulse was 136. The arms became relaxed. The administration lasted 141 seconds; the anæsthesia 18 seconds. During the operation loud phonation and much movement occurred. There were no after-effects. In Case 17 the same method was followed with an interesting result, the patient remaining conscious—that is to say, responding to remarks—throughout the inhalation and operation periods. Typical analgesia was, in fact, obtained. The induction was uneventful, lasting 207 seconds. At the end of 87 seconds the pulse was 144. There were no reflex phenomena during the operation. There were no after effects. In Case 18 a somewhat different method (see Table) was followed, but with no great improvement in results. During the induction the breathing was regular and slight phonation and movement were recorded. The inhalation lasted 87 seconds. The anæsthesia obtained was of a good type, being deeper than any yet produced with this anæsthetic. It was characterised by slight reflex movement and lasted 36 seconds. There was some distress, with groaning and crying afterwards. As regards the general results in these six methyl oxide cases the arbitrary numerical values were respectively 2, 3, 2, 1, 4, and 2, giving an average of only 2·3.

3. Ethyl Chloride.

In Table II. will be found records of 25 cases in which ethyl chloride was administered. Being unaware of any records as to the effects produced in the human subject by different percentage mixtures of ethyl chloride and air I first prepared certain of such mixtures and administered them as one is in the habit of administering nitrous oxide

TABLE I.—GIVING PARTICULARS OF CASES IN WHICH METHYL OXIDE WAS USED.

No. of case in note-book.	Sex.	Age.	Description and diet.	Methods of administration.	Inhalation	Available anæsthesia	Phenomena remarks	Numerical value.
13	F.	23	Tall; thin, pale; boiled egg, tea, and bread and butter 3 hours before.	[illegible]	Seconds 201	Seconds 78	Slight movement, slight phonation, swallowing, headache and nausea after, considerable distress after, unpleasant induction.	2
14	F.	26	Good heart sounds, not nervous, average build; tea and bread and butter 4½ hours before.	Same method, but about 26,000 c.c. of a 50 per cent. mixture taken, administration as above, except that air slot closed in 72 seconds	153	51	Much movement, swallowing, giddiness after	3
15	F.	25	Anæmic, under treatment for dyspepsia, not nervous, good, regular, heart sounds; bread and milk 5 hours before.	Ditto, but air-slot closed in 97 seconds.	117	30	Moderate movement, moderate phonation, nausea after	2
16	F	19	Average patient, large tonsils, tea and bread and butter 4½ hours previously, two sandwiches just before administration.	*Method 2.*—About 26 000 c.c. of a 50 per cent. mixture of methyl oxide and air taken, to and fro-breathing from the beginning, air-slot gradually closed, completely closed in 51 seconds.	141	18	Much movement; loud phonation	1
17	F	34	Rapid heart action; tea and bread and butter 4½ hours previously	Ditto, but air slot closed in 72 seconds	207	15 (analgesia)	Swallowing.	4
18	F.	18	Tea, bread and butter, and egg, 4½ hours previously	*Method 3.*—About 26 000 c.c. of a 50 per [illegible]	87	36	Moderate movement, moderate phonation, "distress" after	2

or nitrous oxide and oxygen. As will be seen, these cases, as a whole, were not very satisfactory. In Case 2 (the first in the table) a 9·3 per cent. mixture was used. Consciousness was lost in about 84 seconds. The administration was continued till the mixture was exhausted (147 seconds) and was characterised by peculiar apnœic pauses, shallow breathing, and swallowing movements. It seemed as though some peripheral or other stimulus—e.g., greater oxygen restriction—were needed to make the respiratory centre work as well as it generally does with other anæsthetics. The patient became relaxed; there was moderate reflex movement during the operation without phonation. The available anæsthesia lasted 66 seconds. There were no after-effects. The general result was good (A.N.V. = 4). In Case 3 (the second case in the table) the same percentage mixture was employed and with very similar results. All the mixture was administered; apnœic pauses again manifested themselves, and the anæsthesia produced was of a comparatively light type, there being considerable movement during the operation. It is interesting to note, in these as in most ethyl chloride cases, that there was little or [illegible] was lost in about 60 seconds and it is recorded that during the administration the pulse was good, about 100, and the [illegible] like Case 2, there was muscular [illegible] The arbitrary numerical value [illegible] was 3. In Case 1 (the third case in the table) a higher percentage of ethyl chloride—11·9 per cent.—was employed, with the result that consciousness was lost more quickly—i.e., in 33 seconds; that anæsthesia came about more quickly—i.e., in 132 seconds; and that the available anæsthesia, which was of a deeper type, lasted 66 seconds. There were, however, retching and vomiting afterwards, so that the general result was unsatisfactory (A.N.V. = 2). Apnœic pauses were also observed in this case and the muscular system became relaxed. In Case 11, the next case in the table, the percentage of ethyl chloride was practically the same, and much the same results were obtained (A.N.V. = 2). Although there were only four cases in which Method 1 was employed results were sufficiently unsatisfactory to condemn the method, the average numerical value being only 2·7 of a possible 5. I next tried a plan by which to-and-fro breathing took place towards the end of the administration, hoping to avoid by the retention of CO_2 the apnœic pauses of Method 1. In Case 4 the arbitrary numerical value was 4, but in Case 5—that of a girl, aged 16 years—a very bad result was recorded giving a numerical value of only 1. It seemed probable in Case 5 that the excitement which occurred had its origin in the unpleasant suffocative sensations afterwards described by the patient. I therefore determined in the next series of cases to allow some air to obtain access with the first inhalations of a definite mixture. This was done in Case 6, but the result was only moderately good (A.N.V. = 3). In Case 7 a high-percentage mixture was used, but a numerical value of only 2 is attached to the case. In Case 22 there was so much struggling that the method may be said to have practically failed, the numerical value being but 1. In Cases 23 and 24 the results were also unsatisfactory, 3 and 2 being the numerical values respectively ascribed. In nearly all the cases of this method swallowing and shallow breathing again characterised the administration period. The average numerical value of the five cases of Method 3 is very low—viz., 2·2.

The foregoing cases seemed to indicate that whatever method might eventually prove to be the best for the administration of ethyl chloride, the continuous inhalation, without re-breathing, of mixtures of this anæsthetic and atmospheric air produced results which were by no means satisfactory. At the same time the effects obtained by percentage mixtures were not without interest. The next step was to obtain records of administrations in which the re-breathing factor was allowed to exert its influence. I therefore next subjected to this system of note-taking a case in which five cubic centimetres of ethyl chloride were administered from a Clover's ether reservoir to which was attached a bag containing 10,000 cubic centimetres of air, the expirations being at first allowed to escape but being retained during the second half of the administration (Table II., Case 8, Method 4). As will be seen from the table a better general result (A.N.V. = 4) was obtained. By this plan it was possible to incre[illegible] so gradually that there was litt[illegible] patient. The apparatus, however, [illegible] I therefore decided to endeavour to obtain [illegible] pler methods. I accordingly [illegible] by the simple plan of taking [illegible] and gradually diffusing into it [illegible]

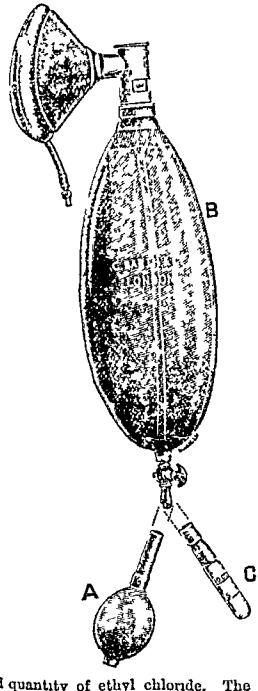
TABLE II.—GIVING PARTICULARS OF CASES IN WHICH ETHYL CHLORIDE WAS USED.

No. of case in note-book.	Sex.	Age.	Description and diet.	Methods of administration.	Inhalation.	Available anæsthesia.	Phenomena: remarks.	Numerical value.
					Seconds	Seconds		
2	F.	26	Thin; average height; rapid cardiac action; egg, &c., 3¼ hours previously.	*Method 1.*—A mixture of ethyl chloride and air administered by inhaler with inspiratory and expiratory valves, each expiration escaping; 17,904 c.c. of a 9·3 per cent. mixture taken (5 c.c. of ethyl chloride to 16,250 c.c. of air).	147	66	Swallowing movements; moderate reflex movement during operation.	4
3	F.	—	Good heart sounds; no food for 5 hours.	*Ditto.*	168	39	Considerable reflex movement; phonation at 39 seconds of available anæsthesia period; giddy after.	3
1	F.	18	Looks a good subject; average height and build; no food for 5 hours.	Ditto. 27,758 c.c. of an 11·9 per cent. mixture taken (10 c.c. of ethyl chloride to 24,450 c.c. of air).	132	66	Unpleasant sensations during induction; retching and vomiting after.	2
11 (See also Case 10.)	F.	—	Tall; pale; not nervous; no food for 4 hours.	Ditto. 27,770 c.c. of a 12 per cent. mixture taken (10 c.c. of ethyl chloride to 24,450 c.c. of air).	105	51	Headache and violent retching after.	2
4	F.	28	Average build; suckling; rather anæmic; egg and tea 3 hours before.	*Method 2.*—A definite quantity of a definite mixture placed in bag; about one-half breathed as in Method 1; the remainder breathed backwards and forwards, the expirations thus being retained. 16,642 c.c. of a 9·8 per cent. mixture taken (5 c.c. of ethyl chloride to 15,000 c.c. of air).	117	39	Moderate reflex movement; slight phonation.	4
5	F.	16	Healthy looking; average size for age; no food for 5 hours.	Ditto. 11,642 c.c. of a 14·1 per cent. mixture taken (5 c.c. of ethyl chloride to 10,000 c.c. of air).	87	39	Unpleasant sensations during induction; much excitement; much movement; considerable headache and nausea after.	1
6	F.	25	Well-nourished; average height and build; no food for 5½ hours.	*Method 3.*—A definite quantity of a definite mixture placed in a bag; some air permitted to gain access with first few inspirations of mixture, all expirations escaping; the pure mixture then inhaled, expirations still escaping; finally the remainder backwards and forwards. 11,620 c.c. of a 13·9 per cent. mixture taken (5 c.c. of ethyl chloride to 10,000 c.c. of air).	126	45	Slight excitement; moderate movement; slight phonation; slight headache.	3
7	F.	22	Rather badly developed; good heart sounds.	Ditto. 13,240 c.c. of a 24·4 per cent. mixture taken (10 c.c. of ethyl chloride to 10,000 c.c. of air).	96	36	Induction unpleasant; moderate movement; loud phonation.	2
22	F.	18	Heavily built girl; anæmic; good heart sounds; tea 5 hours before.	Ditto. 15,677 c.c. of a 10·7 per cent. mixture taken (5 c.c. of ethyl chloride to 14·000 c.c. of air).	165	—	A failure. So much struggling when face-piece removed that more ethyl chloride had to be given.	1
23	F.	—	Thin; average height; rather anæmic; quick heart action; tea and bread and-butter 5 hours before.	Ditto. Same mixture.	180	36	Moderate movement; swallowing; slight nausea after; pleasant induction.	3
24	F.	16	Good heart sounds; not markedly nervous; food 3 hours before.	Ditto. 15,871 c.c. of a 10·5 per cent. mixture taken (5 c.c. of ethyl chloride to 14,200 c.c. of air).	180	27	Loud phonation; swallowing; vomiting after.	2
8	F.	17	Aspect of congenital syphilis.	*Method 4.*—5 c.c. of ethyl chloride in a wide-bore Clover's inhaler; 10,000 c.c. of air in bag attached thereto; indicator at "0," then gradually turned to "3"; expirations at first allowed to escape, then, when bag about half empty, to-and-fro breathing.	138	39	Slight movement; slight headache after.	4
25	F.	35	Good heart sounds; tea and bread-and-butter 3½ hours previously.	*Method 5.*—3000 c.c. of air in rubber bag; 5 c.c. of ethyl chloride in glass tube attached to lower part of bag; administration begun by to-and-fro breathing of air in bag; ethyl chloride gradually tilted into bag and mixed with air; to-and-fro breathing throughout.	90	66	Slight movement.	5
26 (See also 16 and 28.)	F.	19	Large tonsils; average; tea and bread-and-butter about 5 hours before.	Ditto.	72	About 45	Moderate movement at 30 seconds in operation period.	5
29 (See also 35, 38, 44, and 47.)	F.	35	Stout; florid; not nervous.	Ditto.	75	51	Slight movement.	5
30 (See also 34.)	F.	19	Dark; tall; thin; not nervous; tea and bread-and-butter 3½ hours before.	Ditto.	84	45	Moderate phonation.	4
31	F.	14	Small; dark; thin; anæmic; nervous; a mouth breather; tea and bread-and-dripping 4 hours before.	Ditto.	?	? 39	Vomiting and depression after.	2

TABLE II.—GIVING PARTICULARS OF CASES IN WHICH ETHYL CHLORIDE WAS USED—(*Continued*)

No. of case in note-book.	Sex.	Age.	Description and diet.	Methods of administration	Inhalation	Available anæsthesia.	Phenomena remarks	Numerical value
					Seconds	Seconds		
33	F	29	Probably an alcoholic, tea and egg 4½ hours before, some whisky since.	*Method 5*—3000 c.c. of air in rubber bag, 5 c.c. of ethyl chloride in glass tube [illegible] breathing throughout	90	42	Some excitement, moderate movement, loud phonation	2
36	F.	20	Average, tea only 4 hours before	Ditto	78	60	Some "distress after	3
46	F.	32	Short, fair, tea only 5 hours before	Ditto	81	36	Moderate movement, giddiness, slight nausea, and slight "distress" after.	3
50 (See also 43)	F.	46	Bread and-butter and cocoa 4½ hours before	Ditto	75	66	*Nil*	5
40	F	20	Bread and butter and tea 5½ hours before, nothing since	Ditto, except that 4 c.c. of ethyl chloride used	70	54	Slight phonation slight nausea and giddiness after	3
32	F	14	Bread and butter, ham, tongue, and tea 2½ hours before	Ditto, except that 3 c.c. of ethyl chloride used	114	39	*Nil*	5
37	M	14	Anæmic, badly developed	Ditto	99	30	Slight movement, loud phonation	3
39 (See also 43)	F	13	Very nervous child Tea and bread and butter 4½ hours before	Ditto	93	27	Much movement, loud phonation	1

FIG 1.



a measured quantity of ethyl chloride. The accompanying figure shows the arrangement of apparatus By means of a hand-bellows (A) of known capacity 3000 cubic centimetres of air are pumped into the bag (B), the lower stop cock of which is then turned off Five cubic centimetres of ethyl chloride are now placed in the graduated glass tube (C) and the bellows having been detached from the lower stopcock of the bag this tube with its ethyl chloride is attached to the stop cock The face piece having been accurately adjusted the patient breathes air backwards and forwards through the air slot of the upper stopcock which contains no valves The stopcock is now turned on and to and fro breathing takes place into the bag The tube with its charge of ethyl chloride is then gradually tilted and the anæsthetic enters the bag, being gradually diffused into the air therein There is no cough, holding the breath, or resistance and anæsthesia is rapidly induced In Cases 25, 26, 29, 30, 31, 33, 36, 46, and 50, five cubic centimetres of ethyl chloride were thus gradually added to 3000 cubic centimetres of air, and much better results than those hitherto obtained at once manifested themselves, the average numerical value of these nine cases, in fact, being 3 8 In the remaining four of the ethyl chloride cases rather less than 5 cubic centimetres of the anæsthetic were used and with one exception, that of a child, 13 years old, good results followed, the average numerical value of these four cases being 3 0 The shallow breathing, apnœic pauses, and unpleasant after effects which had characterised the uniform percentage cases now failed to manifest themselves, although a good type of anæsthesia was produced Moreover, this new method of administration had a much shorter inhalation period, as will be seen from the figures of the table As regards the available anæsthesia in the 13 cases of Method 5, the average works out at about 46 seconds The weak point in ethyl chloride anæsthesia is undoubtedly its tendency to be followed by unpleasant after effects and this is exemplified in these cases of Method 5 as well as in cases of preceding methods In connexion with this method it may be pointed out that [illegible] bag can readily be washed in [illegible] ome antiseptic solution, such [illegible] each case—a procedure which is essential in all methods involving re breathing

(To be continued)

HOSPITAL SATURDAY AT TAUNTON.—As a result of the recent Hospital Saturday collections in Taunton the sum of £80 has been handed over to the medical charities of the town

HUNTERIAN SOCIETY.—The first Hunterian Society's lecture of the session was delivered on Nov. 9th by Dr. J Rose Bradford, F R S, who took for his subject the Treatment of Bright's Disease, the President, Dr F J. Smith, being in the chair. At the close of the lecture a vote of thanks to Dr Bradford was, on the proposition of the President, carried by acclamation.

NON-FATAL RUPTURE OF AORTIC ANEURYSM.

BY CHARLES H. MELLAND, M.D. LOND., M.R.C.P. LOND.,
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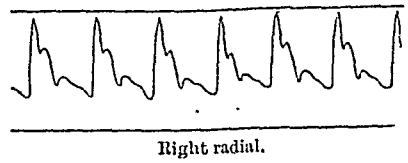
IT has generally been considered that free rupture of an aortic aneurysm must necessarily be rapidly fatal within a period of a few minutes, but a small number of cases have now been recorded in which life has been maintained for several weeks, months, or even years after such rupture has occurred, and to this small number of cases I wish to add the one given in fuller detail below. The cases in question have been those in which there has been distinct rupture of the wall of the sac with extensive hæmorrhage either into the œsophagus, or air passages, or into one of the cavities of the body, as the pleura or pericardium, and the character of the hæmorrhage has been such as to prove that the sac has given way freely and has not been that of a mere leakage through a minute opening such as may not uncommonly occur for some days or even weeks before a fatal rupture takes place.

Ferry[1] in recording recently a case of this nature gives short *résumés* of eight other cases which he has been able to gather from medical literature. His own case had had profuse hæmoptysis two years before death and at the necropsy there were found, besides the evidence of recent rupture into the lung, distinct old scars in the aneurysmal sac which apparently represented the healed site of the previous rupture. The eight other cases to which he refers lived varying periods from three days to ten months after the occurrence of symptoms suggestive of rupture. He states further that a number of cases are recorded where patients lived a few hours or perhaps a day or two after rupture of an aneurysm into the lungs, pleural cavity, or pericardial sac, but considers that these fall into a different category from those which he records, in which there was practically for the time being recovery from the rupture. And, of course, the number of cases in which slight leakages take place from quite minute apertures in the aneurysmal wall for variable periods before the termination of the disease is very considerable. There are, however, several cases which are not included in the list that Ferry has collected which Gairdner[2] has made mention of in his "Clinical Medicine." One of these was that of the celebrated surgeon Liston, a more complete account of whose case is given in THE LANCET of Dec. 11th, 1847, p. 633. Here a considerable hæmorrhage, suggestive of free rupture of the aneurysmal sac, was succeeded by a period of quiescence and death occurred five months later, not from hæmorrhage, however, though there had been slight discharges of blood in the interval. The trachea was found to be perforated in three or four places and portions of the aneurysmal clot were discovered projecting through the openings partially blocking them up and so preventing further severe hæmorrhage. In a second case that had been under Gairdner's own care the patient had a very large sudden gush of blood, sufficient to cause syncope, nearly five years before death, and this was repeated an hour or two later. He recovered from the hæmorrhage, however, and improved so as to be able to take moderate outdoor exercise, occasionally bringing up more or less tinged expectoration, a minute patency of the aperture in the sac being apparently left after the first big hæmorrhage. He died finally after bringing up quite a small amount, from eight to ten ounces, of blood. Another case referred to by Gairdner was communicated to Syme[3] by Ramsay in which there was rupture of an aortic aneurysm externally opposite the cartilage of the third rib. The patient lost a large amount of blood until he fainted, then the bleeding stopped and he lived afterwards for four months without any new bleeding and died in the end not from the aneurysm but from "typhus fever."

The following case came under my care when resident medical officer at the Manchester Royal Infirmary some years ago. An outdoor labourer, aged 56 years, was admitted under the care of the late Professor Leech on June 7th, 1899. He was admitted with the history of having brought up a large amount of blood whilst at his work, an amount estimated by a mate as "a bucketful," which is plainly above the mark, but it was evidently very large. He was in a state of collapse, barely conscious, almost pulseless, and absolutely blanched; the surface of the body was cold and covered with clammy sweat. The pulse, such as it was, was weak, rapid, and "slapping," and the respirations were hurried and shallow. He appeared to be moribund, but as the hæmorrhage had ceased saline infusion was resorted to, two pints being introduced into his median basilic vein. The infusion had an immediate effect, he rapidly rallied and improved much in his general condition. A history was then obtained from him that he had had cough for eight months, sufficiently severe for him to go to see his medical adviser on four occasions, and he had been given medicine for it though no physical examination of his chest had been made. For the last few years he had noticed at intervals a stabbing pain in the chest, reaching from the right shoulder to the ensiform cartilage, which came on whilst at work and only ceased after he had rested for a while. He continued at work, however, although he began to spit blood during the three weeks before admission. The more extensive rupture occurred indeed whilst he was at work. He was exerting himself discharging a barrowful of bricks when he felt a "catching" at his chest and had the sudden and very severe attack of hæmorrhage for which he was taken to the hospital. There was little of note in his previous history. He had been accustomed to take a fair amount of beer; there was no history of syphilis obtainable but one of heavy work as a general outdoor labourer.

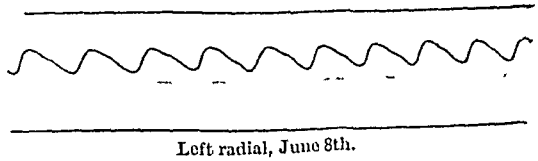
His general condition became very comfortable after the saline infusion and continued so for three weeks. The heart was somewhat hypertrophied, the impulse being in the sixth left space, just outside the nipple line. There was dulness in the second left interspace, just outside the edge of the sternum, but no pulsation was felt over the area nor were there any abnormal auscultatory signs either there or elsewhere over the chest. There were tracheal tugging and inequality of the pupils. The pulses were markedly unequal; indeed, on the day of admission the left radial pulse could not be felt but after he had been inside for a few days it was plainly recognisable. The right pulse was of a "water-hammer" type. The characters of the two pulses are well seen in the accompanying sphygmograms. The carotid

FIG. 1.



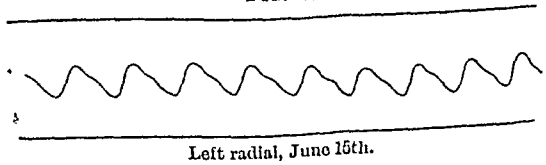
Right radial.

FIG. 2.



Left radial, June 8th.

FIG. 3.



Left radial, June 15th.

pulses appeared equal. The improvement was maintained for nearly three weeks and then, on June 26th, he had a severe hæmorrhage in the early morning. He was much prostrated but rallied, and on the 28th he had further hæmorrhage and saline infusion was again resorted to. The bleeding recurred, however, about one and a half hours later and this proved fatal.

At the necropsy the aorta was found to be extensively atheromatous, with some thickening and obstruction, though not complete occlusion, of the orifices of the coronary arteries. The saccular aneurysm arose from the convexity of the arch

[1] N. S. Ferry: American Journal of the Medical Sciences, July, 1904.
[2] W. T. Gairdner: Clinical Medicine, Edinburgh, 1862, pp. 509 et seq.
[3] Monthly Journal of Medical Science, vol. x., p. 89.

immediately beyond the left carotid and was of about the size of a large hen s egg The subclavian artery came off from the upper and outer part of the sac, which was almost filled with firm laminated clot Posteriorly the aneurysm had extended and insinuated itself between the trachea and the œsophagus The trachea had been pressed upon, its wall thinned out and its mucous membrane softened, and in this softened area there was a vertical slit about three eighths of an inch in length, with rounded, softened edges, through which the bleeding had occurred

The case calls for but few further remarks As in the other cases recorded, the stoppage of the hæmorrhage after free rupture had occurred must be attributed to the considerable amount of clot contained in the sac a portion of which had, no doubt, been carried across the rupture so as effectively to plug it and to stop further bleeding, for the time being at any rate The value of the saline infusion was very plainly evident, the condition of the patient visibly improved from minute to minute whilst it was in progress It should certainly in no instance be neglected in cases of severe hæmorrhage, at any rate when the hæmorrhage has ceased, or even if it has not I can recall a number of cases in which patients with apparently only a few minutes to live after severe hæmorrhage have rapidly "come to life" again as the result of prompt saline infusion and in some with permanent recovery It is advisable, therefore that the apparatus for it should always be ready at hand and the very simple technique always at one s fingers' ends

Manchester

ON THE ACTION OF PERCHLORIDE OF IRON IN BLOOD POISONING AND OTHER DISORDERS

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DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE (1873 93) CONSULTING PHYSICIAN TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE

IN an article of mine on the Treatment of Anæmia or Chlorosis which appeared in the *Practitioner* for 1897, p 352, the following remarks occur —

> istrate this it is only
> official solution of
> iodide mixed with
> a deep blue colour
> pure chlorine water
> fires a blue colour on
> the addition of a drop of the solution owing to the liberation of nascent oxygen by the free chlorine

The beneficial result which immediately followed the administration of the tincture of the perchloride of iron in the case so graphically described by Sir Isambard Owen[2] was, I venture to suggest, due to the presence of free chlorine in the mixture added possibly by the three grains of quinine which accompanied each dose Various observers have from time to time called attention to the beneficial action of the perchloride of iron in different forms of blood poisoning As Sir Dyce Duckworth has pointed out Mr G Hamilton Bell in 1851 was the first to do so with regard to its action in erysipelas Mr Bell[3] states that he had made use of it for upwards of 25 years without having, in a single instance failed of success, giving in mild cases fifteen drops of the tincture every two hours, in severer cases 25 drops "persevered in night and day however high the fever and delirium" These statements were confirmed by his brother Dr C Bell,[4] who states that "it is a remarkable circumstance in the exhibition of this valuable remedy in the erysipelatous diatheses that, although given in much larger and more frequently repeated doses than have been recommended in our dispensatories, it never produces headache, and when this symptom is present it quickly relieves it at the same time it reduces and regulates the pulse thus showing that in this state of the system it has a soothing and sedative as well as an alterative effect" He administered the remedy in doses of 25 minims every two or three hours Dr G W Balfour[5] also regarded this preparation "as a certain and unfailing remedy" a few doses, he says, of 20 minims 'suffice to remove the pain and lessen the heart s action, it never produced headache or other unpleasant symptom, and was continued with advantage through the highest delirium, its curative action seems, as G Hamilton Bell supposes, to be exerted on the capillary vessels' Mr J Hawkes[6] who administered the remedy in one drachm doses three times a day, endorses the views of the above mentioned observers

In scarlet fever beneficial effects of the remedy have been reported by Dr H S Byrd of America and by Mr Meade of Bradford both influenced by the analogy which to them appeared to exist between this disorder and erysipelas Dr Byrd prescribed the remedy in small doses of three or four drops every four hours He was so satisfied with the results that he 'would not exchange it for all the other remedies which he had before used in scarlet fever'

My own experience of the remedy in these disorders makes me hesitate to prescribe it with the boldness of some of the authorities above referred to—at all events, for any lengthened period Large doses not infrequently increase the fever and set up intestinal irritation, palpitation, and headache Every physician is acquainted with the symptoms that arise when large doses of iron have been taken for some time Irritation of the abdominal organs, which evidently begins in the intestine, is set up and may extend to the peritoneum and be accompanied with the usual symptoms—pain, discomfort a tendency to vomit, diarrhœa or constipation and general exhaustion, the last, however, not being apparently dependent upon the condition of the abdominal organs These symptoms may persist for some days even when the iron is immediately discontinued and may then gradually subside'[7] Moreover, if, as I maintain, the beneficial effects of the remedy are largely due to the free chlorine it contains heroic doses are not called for The most judicious plan is to give moderate doses such as were administered in the case recorded by Sir Isambard Owen, every six hours cautiously watching their effect and administering them more frequently if the patient will bear them, if not to keep to moderate doses and if further antiseptic action is required, to effect this by the internal administration of chlorine water or euchlorine alternately with or in the intervals between the doses of iron In this way the irritation which may arise from large doses of the latter remedy may be avoided

Various writers in the past century have testified to the efficacy of chlorine water in scarlet fever and other forms of fever, specially in those of a low type Braithwaite was the first to use it internally and held it to be as truly a specific for scarlet fever as mercury for syphilis or quinine for ague Sir Thomas Watson[8] calls attention to the high praise bestowed upon this remedy by Messrs Taynton and Williams in the treatment of scarlet fever Under their care was a schoolboy suffering from scarlet fever 'who was most dangerously ill The skin was covered with an eruption of a dusky hue the nostrils excoriated by the acrimony of the discharge, the greatest difficulty in swallowing anything, low delirium with a very rapid pulse, in short, every symptom of approaching dissolution In this state he began to take the chlorine in the evening, one drachm in half a pint of distilled water The nurse was directed to give him as much as she could prevail on him to swallow On visiting him the following morning there was evident amendment and in 24 hours he appeared out of danger Encouraged by this favourable case we gave it to patients of all ages, and we can most solemnly declare that it proved successful in almost every case in which we were called in time and in which the medicine was faithfully administered'[9]

In the *Edinburgh Medical Journal*, vol xvii, p 514, 1872 Dr W G Balfour states that Dr Matthew Gairdner of Crieff was the first to administer chlorine in diphtheria and with marked advantage Dr Balfour further states that, "whatever be the theory of the action of chlorine in cases of diphtheria I have not found it fail in the treatment of this disease when faithfully given since Dr Gairdner

[1] Lectures on Pharmacology vol ii, p 46 Sydenham Society s translation
[2] THE LANCET Oct 15th, 1904 p 1079
[3] Monthly Journal of Medical Science 1851, vol xii p 497.
[4] Ibid, p 502.
[5] Monthly Journal of Medical Science, vol xii 1853 p 423
[6] THE LANCET Feb 9th 1856 p 151
[7] Ritz, loc. cit. vol. ii p. 49-50
[8] Practice of Physic, fourth edition vol ii p 910.
[9] Medical Gazette, 1829, vol iv p. 432.

called my attention to it." The chlorine water was prepared as follows: "Put eight grains of chlorate of potassa in a strong pint bottle and add a drachm of strong hydrochloric acid, close the mouth of the bottle whilst the violent agitation lasts, then add water ounce by ounce with constant agitation until the bottle is full. An adult may use the whole pint in a day." Sir Thomas Watson[10] adds: "The chlorate should be pulverised, and in cold weather the bottle should first be warmed." The amount of potassium chlorate might, I think, be increased with advantage. I would suggest that instead of eight grains 20 grains of the powdered chlorate should be used with one drachm of strong hydrochloric acid and water added as above directed to 20 ounces. Peroxide of chlorine and chlorine are contained in the solution. The following expresses the reaction:—

$$4\,KClO_3 + 12\,HCl = 3\,ClO_2 + Cl_2 + 4\,KCl + 6\,H_2O.$$

We have sufficient evidence, then, that in various forms of blood poisoning chlorine and the tincture of the perchloride of iron may act beneficially. The question remains whether these remedies should be employed independently of Roux's or other serum or in conjunction with it and in the latter case at what stages should one or both be administered. This can only be answered by the results of further observations.

Cambridge.

A CASE OF ENCEPHALITIS CEREBELLI.

BY FREDERICK TAYLOR, M.D. LOND., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO GUY'S HOSPITAL AND CONSULTING PHYSICIAN TO THE EVELINA HOSPITAL FOR SICK CHILDREN.

AT the meeting of the Clinical Society of London on Oct. 28th Dr. F. E. Batten showed a child suffering from encephalitis cerebelli and I took the opportunity of briefly mentioning a similar case which was under my care many years ago.[1] I was, however, speaking only from memory as I could not lay my hands upon the notes. Since then, however, I have not only found the notes but I have also seen the patient. At the time of the record the conceptions of encephalitis were different from what they are now and the diagnosis lay rather between an infantile disseminated sclerosis and a cerebellar tumour than with any recoverable inflammatory lesion. When improvement slowly occurred the possibility of a tuberculous tumour, calcifying and shrinking, was entertained. But for some time now I have satisfied myself that it conforms to the cases recognised as acute encephalitis and I take the present opportunity of publishing it. If the records are not in every way complete it at least shows these important features; tremor and ataxia of cerebellar type, nystagmus, absence of optic neuritis, a possible origin in an infections disease—namely, whooping-cough—and recovery after a duration of certainly more than three and a half years. The importance of this last fact was admitted by Dr. Batten in relation to the prognosis of such cases when seen early.

The patient, a boy aged four years, was admitted under my care into the Evelina Hospital for Sick Children on June 17th, 1875. The family history was good except that two children had died from fits under 12 months of age and there was no history of syphilis or rheumatism. He had whooping-cough about three weeks previously and had had no other illness. Six weeks previously he fell down three stairs but did not seem to be much hurt and did not to the mother's knowledge strike his head. Three weeks previously it was noticed that his eyes began to twitch and then his hands and afterwards his feet. Then he began to drop things out of his hands and he had since been unable to walk. For the last four days he had vomited after food, but there had been no constipation and the bowels had been opened regularly. He had always had difficulty in holding his urine and this was worse lately. The description given on June 19th was to the effect that he could not speak plainly. He could not stand by himself and if he was assisted to walk his legs were dragged; when sitting up he was unsteady, bending slightly forwards and then recovering himself. He could pick up a pin with his fingers. There was lateral nystagmus occasionally. The chief characteristic of the case was the trembling of the limbs and trunk, which had a close resemblance to that of disseminated sclerosis, so much so that I asked the late Dr. Moxon to see the patient, but he would not allow that he was suffering from that disease, preferring to believe that the symptoms were due to a cerebellar lesion. The limbs were quiet as he lay passively on his back, and only trembled to any considerable extent when he sat up or lifted his arm to take hold of any object. Even then the movements were not violent, they were quick and short but not extensive. Nystagmus was often present. His eyes were often examined with the ophthalmoscope but no change in the fundus was ever seen. During the fortnight after his admission he was several times sick but the vomiting ceased after June 30th. During the next two months there was very little change: he was drowsy sometimes in July; in August he seemed to be gaining power over his legs; and on his leaving the hospital on Sept. 8th he was said to be better than before. He was treated with potassium iodide in five-grain doses twice daily. In the summer of 1876 I ascertained by inquiries at his home that he had been for some little time in the country and that generally he was much improved in strength though still suffering from the trembling movements.

On Feb. 3rd, 1877, I again called at his mother's residence and made the following notes. He had been home then since August last year. He had grown taller since leaving the hospital, was rather thinner, less childish in the face, with darker and less curly hair. He was fairly intelligent-looking. As I reached the house he was being helped along by his sister. He seemed at first to have very little use in his legs and she helped him on to the door-step. However, on level ground he could get along, but in a highly ataxic manner: His movements were precisely those of a drunken man. He did not waddle or throw out his legs with the usual ataxia of tabes dorsalis but having placed one foot on the ground he could not balance himself sufficiently long on it to put the other in the right place; thus for a few steps he would plunge headlong forwards only just saving himself from a fall, then he would pull up and steady himself; another moment and he was again staggering forwards, frequently crossing one leg in front of the other. He appeared to have good strength in his legs, for he was lively and active, and while I was there was constantly dashing out of the room, into the opposite room, or along the passage. He seemed in constant danger of falling and had one fall while I was there. The arms were also ataxic; on attempting to take hold of any object or write with a pencil the hand was tremulous and rather jerking in its movements. Tremor of the head and neck was scarcely noticeable and I omitted unfortunately to observe whether he had any nystagmus. His sensation was apparently normal and he was a lively, cheerful boy. They said he knew his letters but had got no further in his education. His speech was hesitating and the voice was not properly modulated; what he said was mostly intelligible, but articulation was not so distinct as it should be in one of his age, and some utterances in answer to a question of mine were altogether unmeaning. He obviously saw and heard quite well and the mother did not know of his having any other complaint. He was under no treatment.

On Nov. 27th, 1878, in answer to inquiries, his mother wrote that "he has wonderfully improved in the last 12 months; his speech is a little imperfect and there is at times a wildness in his eyes but his general health is very good and he is able to run and bowl a hoop. We have had no medical advice for him since he left the hospital." I have no further note of him though I believe I heard again after some months that he was quite well. However, I actually saw him a fortnight ago, on Nov. 4th. He is 33 years of age, is a clerk, having business in London and residing at six miles distance. He remembers little of his illness but thinks he was quite well about the age of eight or nine years. He presents no signs of his former complaint; muscular power, gait, knee-jerks, and optic discs are all normal; he is an active man and includes hockey among his recreations.

Wimpole street, W.

[10] Loc. cit.

[1] THE LANCET, Nov. 5th, 1904, p. 1285.

NEW MORTUARY FOR STONEHOUSE.—At the meeting of the Stonehouse (Plymouth) urban district council held on Nov. 8th it was decided to apply to the Local Government Board for permission to borrow £1000 for the provision of a new mortuary and disinfecting chamber.

HILL DIARRHŒA IN THE PLAINS

By P. A. NIGHTINGALE, M.D. LOND.,
LATE PHYSICIAN, BRITISH LEGATION AND ROYAL HOSPITAL, BANGKOK

One of the commonest ailments to which a newcomer to Bangkok (Siam) is subject is early morning diarrhœa which runs a course identical with the hill diarrhœa described by Manson and Crombie. Now Bangkok is the centre of a large rice district and is only a few inches above high water mark, especially during the wet season when the river is in flood. These cases of diarrhœa occur for the most part during the rains, are more common in the new than in the old resident and in males than in females. The Siamese themselves are not subject to attacks. The only special point of interest to note here is that in the older residents the possibility of a commencing sprue should be carefully borne in mind, the copious, frothy, pale, and evil smelling stools of both bearing a close resemblance to each other.

The history of the majority of the cases was the same. After perspiring very freely all day the patient would go to bed soon after ten o'clock when the temperature was about 83° F. (moist heat) putting on a cholera belt and ordinary pyjamas or native silk garment. Tossing about the bed the cholera belt would ruck up and the patient eventually goes to sleep still perspiring freely, with his liver and abdomen entirely unguarded. At about 3.30 A.M. the temperature would fall to 75° F. and at the same time a slight breeze would spring up which striking on the patient would stop the perspiration, produce a slight chill and eventually wake him up. He would then cover himself up with the rug which was at the foot of the bed though the mischief was already done. The first attack of diarrhœa would probably begin about 6 A.M.

One case under my care was particularly instructive. It was that of a European nurse who within the first few months of her arrival had several attacks of early morning diarrhœa. About the tenth month another attack set in, and two months later a very acute and severe case of sprue with vomiting was easily diagnosed, necessitating her return home as soon as she was fit to travel.

In addition to the usual diet and treatment I found salol, papain and a mustard plaster to the liver of considerable value always regarding the affection as primarily due to hepatic disturbance. With regard to the prophylaxis I was in the habit of laying stress upon the following: flannel pyjamas or Chinese trousers to be worn at night, a proper native sleeping mat to be placed over the sheet, a blanket to cover the feet and two large 'Dutch wives' (a kind of bolster some six feet long) for the patient to lie between. This Dutch wife' well known in Java, the Malay Peninsula and Siam. I am inclined to think of the utmost value for not only is it a cooling and comfortable arrangement to sleep with but acts as an excellent cover to the abdomen against the early morning breeze, and when there is one on either side the whole trunk is guarded in a way that is most complete and valuable. A study of the sleeping compartments of well to do Malays, Siamese and Chinese brings these Dutch wives into great prominence, so that they might perhaps be introduced with benefit into those other tropical climates where hill or early morning diarrhœa is common and where their use is not known or fully appreciated from a prophylactic point of view.

The points which I should like to emphasise are that in my opinion (1) early morning diarrhœa is a better name than hill diarrhœa since out of India the disease is commonly met with on the plains, (2) a chill to the liver is the sole origin of a very large number of attacks, (3) it bears a close resemblance to the early stages of sprue and not infrequently develops or lapses into it, and (4) the Dutch wife is a more valuable guard to the abdomen at night than a cholera belt.

Note.—It is of some interest to note that Mr. Ralph Paget, C.M.G., has just been appointed His Majesty's envoy extraordinary and minister plenipotentiary at Bangkok. From a medical point of view alone the choice is a wise one, as Mr. Paget has had considerable tropical experience including a two years' previous residence in Siam and so will not be so liable to suffer from the effects of the climate as several of his predecessors have done.

Hertford street, Mayfair, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias tum aliorum tum proprias collectas habere et inter se comparare.—MORGAGNI, *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL INFIRMARY, EDINBURGH

A CASE OF DOUBLE STENOSIS OF THE AORTIC ORIFICE

(Under the care of Dr. ANDREW SMART.)

For the notes of the case we are indebted to Dr. H. N. Fletcher, resident physician, and Dr. J. M. Beattie, assistant pathologist.

The patient, a girl aged 17 years, was admitted into the Royal Infirmary, Edinburgh, on June 6th, 1904, complaining of shortness of breath and severe palpitation. She was not troubled with any illness up to the age of 15 years except measles when a child. She had for some years felt a giddiness on rising from a chair but it was not until she started work in a laundry two years previously that there was any symptom which caused her inconvenience. Her new work consisted largely in carrying heavy parcels and baskets and

of breath on exer-
hree months before
me much worse and

she had severe palpitations. A constant dry cough began to trouble her soon after. Four days before admission she fainted at a dance and on the night before admission she fainted again when out for a walk. This attack was accompanied by severe dyspnœa, palpitation, and cough. She vomited brandy which was given her. The sputum was tinged with blood and she was unable to lie down because of the dyspnœa. There was no previous history of rheumatism in any form.

On admission the patient was pale with a slight pink malar flush, the breathing was rapid and laboured, the alæ nasi were distended and working. The sclerotics were pale. There was no œdema of the feet or elsewhere on the surface of the body. There was no clubbing of the fingers. The pulse was 120, very feeble, and without much character, wavy and of low tension; it was almost obliterated on raising the arm. The temperature was 98.6° F. There was slight venous pulsation in the neck. The external jugular was not distended. The apex beat of the heart was feeble and somewhat far out and down. On auscultation a loud rough and prolonged diastolic murmur was heard all over the heart and over the root of the neck. This was most intense at the inner end of the third left costal cartilage and down the sternum. This murmur was the only sound heard in the aortic, pulmonary, and tricuspid areas. On getting towards the mitral area the first sound began to be heard and at the apex was clear and followed by a short systolic murmur not propagated into the axilla, and quickly replaced by the loud diastolic murmur. The right border of the heart was not beyond the right sternal border. There were harsh breath sounds all over the lungs with numerous crepitations at the bases. No albumin was present in the urine.

The patient slept well on the night of admission. The temperature rose on the second night to 99.8° but after that it remained normal. She was kept in bed, put on a light dry diet and given five minims of strophanthus three times a day and was dry cupped several times over the lungs. This helped the symptoms a good deal. After a week when the pulse had much improved in force but still remained fast she was given five minims of tincture of strophanthus and five minims of tincture of digitalis alternately every six hours. Œdema of the lungs at the end of this week had almost disappeared and the cough and dyspnœa were greatly improved. On June 19th (13 days after admission) at 5.30 P.M. sudden acute heart failure came on. Her face was pale and the lips and ears were cyanosed. She was in great distress with extreme dyspnœa was retching but bringing nothing up and the pulse was hardly to be felt. The lungs which had been clear in the morning, were full of moist sounds. Strophanthin, strychnine, ether and

whisky were successively tried, but with only slight temporary relief, and she died at 6.20, about one hour after the onset of the attack.

Necropsy.—The following is the report of the post-mortem examination. There was a mass of dense, fibrous adhesions between the pericardium and the epicardium. On the surface of the left ventricle, about half an inch from the apex, this mass occupied an area half an inch in diameter. There were also some old fibrous adhesions in the region of the great vessels. There were no recent pericarditis and no special thickening of the epicardium apart from the areas already noted. The right auricle was slightly dilated and the wall was slightly hypertrophied. The appendix was elongated. The tricuspid orifice measured 30 millimetres in diameter and the segments showed a slight amount of diffuse thickening. The right ventricle was dilated and its wall was hypertrophied, measuring from four to five millimetres near the apex. The pulmonary artery was narrow at its orifice, measuring 16 millimetres and the valve segments were smaller than normal but showed no degenerative changes. The left auricle was hypertrophied. The mitral orifice measured 24 millimetres in diameter; the segments were very slightly thickened and especially so at their free margins. The left auricular appendix was elongated, measuring 5·5 centimetres. The left ventricle was elongated, the cavity measuring 8·4 centimetres from the attached part of the aortic segments to the apex of the heart. The wall was hypertrophied, measuring from 25 millimetres to nine millimetres at the apex. The aortic valve segments were very much thickened, especially the posterior, which was also retracted. The thickening in the right anterior cusp was largely confined to its right half and that part of the cusp was considerably retracted The thickening of the left anterior was most marked in its right half and here there had been ulceration and perforation of the cusp. The perforation was surrounded by recent vegetations. The aortic orifice was stenosed and measured at the upper limit of the cusps eight millimetres. Immediately above the posterior cusp there was a mass of vegetations on the wall of the aorta. Beneath these there was ulceration of the wall and a small aneurysm about five millimetres in circumference and two millimetres in depth, was bulging towards the left auricle. About five millimetres below the base of the posterior aortic cusp there was a thickened calcareous ring, at parts fully three millimetres in thickness, extending from the base of the left anterior cusp, across the ventricular surface of the anterior mitral segment, and back to the starting point. This ring caused a stenosis below the aortic segments and measured six millimetres in its greatest diameter. (See figure.) The aorta and the coronary arteries

View of aortic orifice, showing posterior aortic cusp and thickened calcareous ring.

were practically healthy. The muscle of the left ventricle was very firm and there was very marked yellowish mottling under the endocardium.

Microscopical examination.—Under the microscope the heart muscle showed an advancing myocarditis. In certain irregular areas the muscle tissue had been destroyed and replaced by fibrous tissue. This fibrous tissue was fairly cellular in character. The cells were mainly of the small mononucleated type, resembling in their characters the lymphocytes. They could be seen at places becoming flattened, the nucleus becoming elongated, and apparently forming fibroblasts. There were very few polymorphonuclear leucocytes. The vessels were distended. No areas of hæmorrhage could be found. At places there were remains of the muscle fibres in these fibrous areas. The nuclei of the degenerated muscle fibres were swollen and the chromatin showed in many parts a karyorhexis. The striation of the muscle fibres even in these degenerated areas was still apparent and there was at places well-marked fatty degeneration. This degeneration was scattered very irregularly and was not at all abundant. Bacteriological examination showed in the vegetations numerous staphylococci and streptococci, but no organisms could be detected in the heart wall.

Remarks by Dr. FLETCHER and Dr. BEATTIE.—The chief point of interest in this case is the condition of subvalvular stenosis. We have not been able to find any record of an exactly similar condition. Sclerosis and calcification without involvement of the valves and giving rise to stenosis have been described, though the condition is apparently very rare. There seems to us no doubt that the condition must have been due to an endocarditis. The aortic valves were probably first involved and the inflammatory or degenerative process had afterwards spread so as to involve the anterior mitral segment and the wall of the ventricle. The great fibrous thickening and the calcareous deposit all indicate that the condition must have been of considerable standing and apparently it was also of slow development. There were no symptoms which caused any inconvenience till two years before admission and then only slight breathlessness on exertion. Three months before admission these symptoms became worse and the patient began to complain of severe palpitation. These symptoms might quite well be explained by the gradually increasing degenerative changes in the myocardium, changes which were apparently due to a malnutrition of the heart muscle from a deficient blood-supply. The fibrous tissue which in places almost replaced the heart muscle was fairly cellular and indicates quite definitely a progressive change of comparatively short duration. About this time, also, the heart was beginning to fail, as evidenced by pulmonary complications. The sudden fainting before admission was probably due to the giving way of the damaged valve. This destruction of the valve was no doubt due to the septic endocarditis, which was of a subacute nature and which had not given rise to any elevation of temperature or other toxic symptoms. There was no history of acute rheumatism and the organisms found at the necropsy were staphylococci and the streptococcus pyogenes. The whole case suggests a slowly developing degenerative change rather than an acute process with secondary degeneration. The presence of fairly recent vegetations with bacteria does not in any way invalidate this view. There was a gradual failure in the circulatory apparatus for three months; the vitality of the patient was considerably lowered and in consequence she was more susceptible to the invasion by organisms of any damaged area. We have no doubt that the vegetations were produced in this way and were not a part of the primary process.

We have to express our indebtedness to Dr. Andrew Smart, senior physician to the Royal Infirmary, under whose care the patient was, for permission to publish the case.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Nov. 14th. Mr. JOHN LANGTON, the President, being in the chair.

Mr. E. MUIRHEAD LITTLE exhibited a case of Traumatic Displacement of the Lower Epiphysis of the Femur Backwards. The patient was a youth, aged 17 years, who presented himself for treatment at the National Orthopædic Hospital on May 11th, 1904, complaining of his right knee. Six weeks before he was knocked off his bicycle and fell, violently striking his right knee on the ground. Skiagrams showed that there was fracture of the epiphysis of the femur backwards. An operation was performed and the femur was

fractured at the junction of the middle with the lower third The leg was then straightened and now only half an inch shortening had resulted The patient had made a very good recovery According to most authorities displacement of this epiphysis backwards was far less common than the forward displacement and therefore it seemed worth while to place the case on record The amount of disability involved did not seem enough to justify so serious an operation as incision and forcible detachment of the epiphysis with chisel or osteotomy followed by attempts at reduction Although the result of treatment adopted in this case was satisfactory Mr Little thought that in the future he would prefer to perform osteotomy of the lower end of the shaft rather than produce a fracture higher up as in the present case—The PRESIDENT had seen five or six similar cases and in all of them the epiphysis had been displaced backwards The fracture was commonest in persons under 20 years of age One case had been complicated by gangrene from pressure on the vessels

Mr F C WALLIS showed two cases of Chronic Osteitis in girls, aged 16 and 18 years respectively Both patients had been under his observation for some years and had been operated upon on more than one occasion They both came with a painful swelling on the tibia which was tender on pressure and ached at night They were otherwise healthy girls and there was no history of tubercle, injury or of any evidence of syphilis Relief was obtained for a considerable time by gouging a channel through the thickened bone and going down to the medullary cavity but in one case it had been necessary to repeat the operation more than once on account of a return of pain Mr Wallis remarked that he had had in all five cases of this kind under his care, some for several years All the patients were girls and in each case one bone alone was affected—namely the tibia The patients ct A bacterio [illegible] oved from one of [illegible] this appeared to be the cause of the chronic osteitis in these patients These cases, though in a mild form, belonged to the same category as the more serious cases of acute infective osteomyelitis The operation in these patients had relieved tension and therefore relieved pain, but all the infected bone could not be removed and the question was whether some much more extensive operation was worth considering—The PRESIDENT referred to a case resembling those before the society in a woman whose femur was affected The disease was most chronic and intractable but ultimately an operation gave relief—Dr C W BUCKLEY (Buxton) had seen a case in which the tit [illegible]

[illegible] Left Lower Extremity of ten years duration The patient a woman, aged 30 years had always when awake more or less tremor of the left foot increased by excitement or fatigue The tremors tended to spread to the other extremities The illness commenced at the end of 1894 [illegible]) with attacks of giddiness [illegible] side), and palpitation Dr [illegible] an Hospital in October 1895 [illegible] Graves's disease and of disseminated sclerosis but the case was probably functional She had improved rather than become worse in the course of ten years—Dr J S RISIEN RUSSELL remarked on the diagnosis between disseminated sclerosis and functional tremor He agreed with Dr Weber in the opinion that the case was one of functional tremor

Dr WEBER also exhibited a case which was probably one of Early Acromegaly with General Overgrowth of the Skeleton The patient, aged 25 years was a tall man with big hands and feet and rather a prominent lower jaw He had slight pulmonary tuberculosis About five years ago he had an epileptiform convulsion and since then he had suffered from headaches (worse at night) and had had occasional fits His intelligence was somewhat below the average He presented none of the ocular symptoms connected with acromegaly The history as to the growth of the head in recent years was uncertain

Dr F J POYNTON and Mr ERNEST A PARSONS exhibited a case of Amaurotic Family Idiocy (Waren Tay's disease) The patient was a child, aged 13 months, of Jewish parentage Of the four other children of the same parents two had died from croup and two were healthy The labour in this case was instrumental At the age of six months the infant was noticed to have some little difficulty in swallowing and the vision seemed to be imperfect The limbs did not grow and the general health was poor At the present time the feet, hands, and limbs were curiously small, the child could not sit up, the neck muscles were weak the legs were cold and blue, and the feet were extended The tendon reflexes were increased Ophthalmoscopic examination showed optic atrophy and a cherry red spot in a pale area at the position of each macula lutea Mr Parsons added that he had lately obtained the brain and cord of a fatal case in which he had found very marked changes in the ganglion cells and in the Nissl's granules, around the macula in the fundi oculorum was a cystic condition—Dr RUSSELL had found in fatal cases intense degeneration throughout the pyramidal system commencing in the motor cells

Dr H MORLEY FLETCHER exhibited a case of Multiple Syphilitic Disease of Joints The patient was a girl 15 years of age who was the subject of syphilitic keratitis The liver and spleen were also enlarged There had been no rashes or signs of hereditary syphilis prior to the age of seven years At eight years of age swelling of the joints was first noticed, the earliest affected being the ankles All the larger joints were symmetrically affected and showed thickening and a varying degree of limitation of movement At present both knee joints contained a considerable quantity of fluid The thickening about the joints appeared to be entirely confined to the soft parts and no change could be made out in the bones Skiagrams of the knee joints showed the epiphyses and cartilages to be normal The long bones showed no thickenings either diffuse or nodular The stiffness of some of the joints appeared to be due to adhesions but there was no ankylosis The condition was a very chronic and painless form of synovitis lasting nearly seven years symmetrical in its distribution involving the soft parts without obvious changes in the bones and thus strongly suggested a syphilitic origin which was confirmed by the visceral changes together with the history—Mr WALLIS agreeing with the diagnosis remarked that the permanent damage done to the joints by syphilitic disease was rarely very great—Dr POYNTON however, believed that there were different types of syphilitic joint disease Some were confined to the synovial membrane, others attacked the cartilage In the case before the society there was a good deal of synovial thickening and this was often very rebellious to treatment—Dr J PORTER PARKINSON asked why the case might not be one of osteitis deformans occurring in a syphilitic child and Dr FLETCHER replied setting forth the grounds upon which the diagnosis was based

Dr ALFRED EDDOWES exhibited (1) a case of Lichen in a woman, aged 55 years The eruption had existed for the past 12 months Flat papules existed in many places and hard pointed papules (so called lichen pilaris) in other places Dr Eddowes gave his reasons for regarding the case as causally associated with gout 2 Dr Eddowes also exhibited microscopic sections of Skin Gout taken from the ear of a patient suffering from other manifestations of acute gout in the foot The specimen showed that the first destructive change was hyaline and that this was followed by a colloid deposit of biurate of sodium—Dr POYNTON remarked that his own observations on gouty deposits were in accord with those of Dr Eddowes the primary change was necrotic biurate crystals were deposited secondarily a point which was insisted upon by Ebstein It was sometimes stated that the pain and the lesion were both the result of deposits of biurate of sodium, but this was not so, the biurate was secondary

Mr V WARREN LOW exhibited a case of Multiple Diffuse Lipomata in a man, aged 46 years The tumours on the neck had appeared 12 years ago and those on the other parts five years ago Enormous masses existed round the neck—The PRESIDENT remarked that the result of treatment in such cases was very unsatisfactory and he referred to a similar case

CLINICAL SOCIETY OF LONDON

Congenital Elevation of the Scapula—Traumatic Axillary Aneurysm successfully treated by Proximal Ligature—Aneurysm of the Intracranial Part of the Left Internal Carotid—Appendix abscess followed by Abscess in the Left Iliac Region

A MEETING of this society was held on Nov 11th Dr FREDERICK TAYLOR, the President being in the chair

20 years. The character of the tumours had also changed; formerly the ovarian tumours which came to the operator were comparatively few in number, of large size, and were frequently complicated with formidable adhesions. Now their number was legion; they were frequently not large and adhesions were often absent. This had resulted from the better education of practitioners who diagnosed these tumours early and advised early operation with the recognition that tapping never cured an ovarian tumour but brought about complications. Tapping might, however, be employed justifiably a few days before operating when a large tumour was embarrassing the action of a weak heart. The President then discussed the danger of infection being transmitted from a patient who was already septic to one who was not, after which he considered the methods and relative merits of hysterectomy, oöphorectomy, and myomectomy, and the necessity of preserving the ovaries as much as possible. Passing on to the subject of the training of gynæcologists he said that if a man desired to become a specialist then his course of instruction must be that of a general surgeon, as he should feel qualified to deal with any complication present in the abdomen. It was to be recommended that he should act for some months as a demonstrator in the anatomical rooms, then as house surgeon in the general surgical wards, and afterwards in the maternity hospital before he became a house surgeon in the gynæcological wards. The life of a gynæcological surgeon was full of exceptional anxiety, neutralised, however, by much satisfaction. His aim should be to do good work and to do it well.

Dr. J. W. BALLANTYNE read notes on a Hydrocephalic Infant delivered by Spinal Tapping. A woman was sent to the Maternity Hospital with her child born as far as the shoulders and the head still above the pelvic brim. She had passed through three previous confinements, two children being born alive and one stillborn from some unknown cause. During this pregnancy she had noticed that her abdomen was larger than in previous pregnancies. The practitioner who attended her in this labour found a transverse presentation, for which he turned after full dilatation of the os. He brought down the feet easily, the body and arms were brought down with considerable difficulty, but no efforts could extract the head. Attempts were made to apply the forceps but without success. She was sent to the Maternity Hospital about three hours after turning; the patient was then in a collapsed condition. The uterus was of about the size of a full-time pregnancy and on passing the fingers behind the fœtal back a well-ossified occipital bone was felt, with a membranous part beyond it. The child was dead. Hydrocephalus was first thought of but it might be an encephalocele, meningocele, cranial or facial teratoma, or a dicephalus with a single body. Hydrocephalus being the most probable condition it was decided to treat it as such. Owing to the mother's condition and to the further manipulation and delay necessary for perforation of the cranium Dr. Ballantyne tried tapping of the spinal cord. With a scalpel an incision was made between the sixth and seventh dorsal vertebræ into the spinal canal; no fluid escaped. A long silver catheter was then insinuated into the spinal canal, bending the back of the infant so as to make the curves of the spinal cord and the catheter correspond. Some resistance was felt on it reaching the cranial cavity but further pressure caused an escape of fluid. The fluid was slightly yellowish and amounted to 36 ounces. The child was then very easily delivered. Without the fluid the child weighed 12 pounds and the circumference of the head was 21½ inches. The procedure adopted was first proposed by Van Heuvel in 1848 and carried out by Tarnier in 1868, by N. Charles in 1881, and by Ira G. Stone in 1897. In another case it failed owing to the passage of the catheter being obstructed by fracture of the cervical vertebræ.—Professor A. R. SIMPSON, Dr. HAULTAIN, Dr. S. MACVIE, Dr. J. RITCHIE, Dr. D. BERRY HART, and Dr. W. FORDYCE discussed the paper.

Dr. R. P. RANKEN LYLE (Newcastle-on-Tyne) read notes on a case of Cæsarean Section at Full Term in a patient with two uteri and two vaginæ. The woman was 31 years of age and had had three abortions in successive years; after the last she had prolapse of the uterus, the cervix appearing at the vulva, which was treated with a Smith-Hodge pessary for seven months. A year afterwards her medical attendant was sent for and found her in labour at full time. The os uteri was of the size of a florin and was displaced forwards by an irregular nodulated hard mass of about the size of a closed fist and immediately in front of the sacrum. Believing it to be a mass of hardened fæces he ordered an aperient and an enema but with no effect on the obstruction. After two hours, as the pains were strong, the head high up in the pelvis and its advance obstructed, Dr. Lyle was asked to see the case. On examination the rectum was found to be empty. The mass was diagnosed as a fibroid in Douglas's pouch and as delivery was impossible by the vagina, Cæsarean section was decided upon. On opening the abdomen the uterus was found in front and was opened; the child, who was alive, and the placenta were removed and the wound was closed with the blanket stitch. The mass was lifted up from Douglas's pouch and proved to be a myomatous uterus, independent of the other one and attached to the top of the vagina on the right side; it had only one ovary and tube on its outer side, none on the inner. There was a reflection of peritoneum from the bladder direct to the rectum between the two uteri. The myomatous uterus was removed by supravaginal amputation. The patient made a good recovery. The vagina was found to be divided by a complete septum attached at its lower end to the vestibule in front and to the perineum posteriorly; at the top of each vagina a distinct and separate cervix was found. The case was unique.—The PRESIDENT and Professor SIMPSON commented on the paper.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Lymphatic Leukæmia.—Aortic Aneurysm.

A MEETING of this section was held on Oct. 28th, Dr. H. O. EARL being in the chair.

Professor E. J. MCWEENEY read a paper entitled "Hæmatological Observations on a case of Chronic and on one of Acute Lymphatic Leukæmia." The first case was that of a man aged 55 years admitted to the Mater Misericordiæ Hospital in Dublin on Sept. 2nd, suffering from splenic tumour, glandular enlargement, and asthma. An injury to the left side of the abdomen was sustained last January, after which a sensation of discomfort developed—a possible traumatic origin being thus suggested. The cervical glands began to enlarge about Easter; the splenic tumour was first noticed in May. The blood count on admission showed 3,908,000 red corpuscles and 163,000 white corpuscles per cubic millimetre; two days later the corresponding numbers were 2,848,000 red corpuscles and 206,000 white corpuscles. The differential count yielded polymorphic cells, 7·8 per cent.; large mononuclear cells, 2·3 per cent.; lymphocytes, 89·5 per cent.; and a few normoblasts, but no eosinophile or mast cells. On Sept. 25th he developed lobar pneumonia, to which he succumbed on the 28th. There were no diminution of the total leucocyte count consequent on the infection and no increase of polynuclear elements in the peripheral blood on the day preceding death. The count on that day showed 3,048,000 red corpuscles and 332,000 white corpuscles per cubic millimetre; the mononuclear cells were 92·4 per cent. On the other hand, the blood taken from the lung at the necropsy 12 hours after death yielded 20·5 per cent. of polynuclear cells as well as 0·5 per cent. of eosinophile cells and 3·5 per cent. of myelocytes, neither of which could be found in the peripheral blood during life. The spleen weighed 51 ounces, was marbled with red and grey patches, and contained infarcts. Microscopically the trabecular system was much reduced and the follicles were obliterated by a uniform distribution of rather large mononuclear elements. The marrow of the femur and humerus was of the normal character; that of the sternum was lymphoid. The liver weighed 283 ounces; the kidneys and suprarenal bodies showed typical lymphoid infiltration. The absence of blood change consequent on pneumococcal infection and the absence of the marrow change were the two most interesting features of the case. The second case was that of a boy, aged nine years. At the time of admission to hospital he had been ill for six weeks and his temperature had varied from 100° to 101° F. He suffered from swelling of the glands, epistaxis, and great prostration. The spleen was moderately enlarged, as was also the liver. There were petechiæ on the skin of the abdomen and legs. The blood count on admission showed 1,898,000 red corpuscles and 212,000 white corpuscles per cubic millimetre, lymphocytes, large and small, being 98 per cent., with

only 0·5 per cent. of polymorphic cells. Many of the lymphocytes showed signs of degeneration. On puncturing the skin through a droplet of Unna's polychrome methylene blue their nuclei took the stain at once. No hard-and-fast line of separation could be drawn between small and large forms; the latter were very labile. Eosinophile and mast cells were absent; normoblasts were present in small numbers but megaloblasts were absent. The patient died 19 days after admission from the uncomplicated disease. The blood count on the day of death was: red corpuscles, 820,000; white corpuscles, 723,000, 99·5 per cent. of which were lymphocytes. Several fields had to be searched before a polymorphic cell was encountered. At the necropsy the heart was found to be distended with puriform blood. The thymus was much enlarged; it weighed 46 grammes. All the serous membranes were covered with petechiæ. All the glands were moderately enlarged, soft, and hyperæmic, but not confluent. The spleen weighed 12 ounces and seemed almost normal, save for the enlargement. The liver was enlarged with enormous leukæmic infiltrations, the intralobular capillaries being literally plugged with lymphocytes. The kidneys were extensively infiltrated. The lymphoid structures of the intestine were enlarged. The marrow of the femur and tibia was hyperæmic and typically lymphoid (splenoid of Ziegler). It consisted almost entirely of large peculiarly labile lymphocytes. Normoblasts were frequent but megaloblasts were few. Coarsely granular cells were absent.—Professor A. H. WHITE said that during the past year he had seen a case of the so-called spleno-medullary leukæmia in which there was apparently a direct connexion between an injury and the disease. The patient fell down the hold of a ship and hurt himself about the abdomen but was able to work on for a fortnight, after which he went into hospital and died in a few weeks from leukæmia.

Dr. J. A. MATSON showed a specimen of Aortic Aneurysm perforating the Œsophagus taken from a woman, aged 50 years. There was a history of alcoholism but none of syphilis. The patient had been subject to attacks of rheumatic fever. Two years previously she had an attack of bronchitis in which she expectorated a good deal of blood.

Dr. T. GILLMAN MOORHEAD exhibited a case of Aneurysm of the Aortic Arch which had ruptured into the Pleura. The specimen was obtained from a man, aged 35 years, who had contracted syphilis ten years previously. The only symptom complained of was cough. Rupture occurred suddenly during sleep, after the patient had been under treatment for four days. Almost the entire wall of the sac was necrotic, brittle, and very thin, and only a small amount of soft clot was present. 100 ounces of blood were found in the left pleural cavity. The curious point about the case was that rupture had not occurred while the patient was at work, as he had been up to within a week of his death.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—The annual general meeting of this society was held at 11, Chandos-street, Cavendish-square, London, W., on Nov. 11th, Mr. John Bark, and subsequently Mr. W. J. Chichele Nourse, presiding.—A vote of thanks to Mr. Bark, the retiring president, was proposed by Mr. E. Dennis Vinrace, seconded by Dr. V. H. Wyatt Wingrave, and carried.—Dr. W. H. Kelson described the case of a patient who had suffered from hoarseness for several years. A papilloma was found occupying the anterior commissure and anterior part of the left vocal cord. The movements of both cords were good.—Dr. Wingrave described a case of Salivary Calculus simulating Angina Ludovici in a male, aged 30 years, and he exhibited the specimen which was removed. There was a considerable and very painful swelling immediately beneath the jaw between the tongue and the hyoid bone. The patient could not open his mouth more than half an inch and there was difficulty not only in breathing but in swallowing and masticating. The lingual tonsils were enlarged and they completely hid the epiglottis, but on running the fingers along the floor of the mouth a salivary calculus was felt at the side of the frænum and when it was removed the swelling went down and the patient was all right in a few days. The calculus was underneath in Wharton's duct.—Mr. Bark said that three years ago he had a similar case occurring in a man and he exhibited the calculus.—In a letter which was read by Mr. W. Stuart-Low, Dr. P. H. Abercrombie described a somewhat similar case which occurred in his practice last April, the patient being a man aged 54 years.—Dr. Wingrave described a case of Epithelioma of the Laryngo-pharynx in which Jacque's œsophageal tube was worn. The patient was a man, aged about 60 years, who came under Dr. Wingrave's observation some eight or nine months ago. The infiltration was very extensive, so that it was inoperable. In order that food might be taken a Jacques's tube was introduced through the œsophagus into the stomach and then it was caught by passing a loop through the nose and brought up through the nostril and carried over to the ear where it was fixed. The tube had never been taken out for seven months and beyond some discomfort from the fœtor the man was no worse in consequence. He could feed himself remarkably well and could correct the fœtor by swallowing a mouthful of sanitas and water until it reached the constriction and then eructating. The pain was great but he derived much comfort from having a grain of powdered opium to smoke along with his tobacco.—Dr. Kelson mentioned that a few months ago he had shown at a meeting of the association a woman, aged 32 years, suffering from epithelioma affecting the posterior part of the larynx and the upper part of the œsophagus. She had difficulty in swallowing and he found that a No. 12 solid-ended Jacques's catheter answered very well. The end was just inside the vestibule of the nose and there was a little bit of silk passing from there so that the tube could not be seen in the ordinary way. When food was to be taken she pulled on the string a little and drew enough of the soft catheter up to pass the finger in and so feed herself.—Mr. Bark said that in the dysphagia produced by laryngo-pharyngeal carcinoma his experience had been in the use of Symonds's tubes which, however, were unsatisfactory in most cases and were soon rejected by patients.—Dr. J. Dundas Grant described an operation for Exostosis of the Auditory Meatus, presenting close to the external meatus. He first used a dental burr and into the aperture made by it he introduced an instrument like a large wool-holder; he simply twisted it in and the exostosis came out quite easily.—Dr. Wingrave described a case of Primary Chancre of the Nose. He could not give any history with regard to the inoculation. The patient was a woman who had been married 14 months. She did not think she was pregnant. The symptoms did not date further back than three months, the active swelling having commenced two months ago.—Mr. Vinrace expressed the opinion that the patient would be found to be pregnant and that the case was one of inoculation through the fœtus and not an inoculation by direct contact forming a primary sore.—The President showed a case of Disease of Sinuses. A permanent opening had been made into the inferior meatus of the nose.—Mr. Bark said that he was not in favour of treating antral suppuration by an opening such as that described. If he were going to make an extensive opening into the outer wall of the nose or the inner wall of the antrum he preferred to do the complete operation—to remove the external wall and the superior maxilla. If for any reason, such as the objection of the patient, he could only do a tentative operation he preferred to make an opening into the canine fossa and to insert an indiarubber tube by means of which the patient could cleanse out the antrum through the nose.—The President replied that he had a particular reason for not doing the radical operation in the present case. Moreover, when he wished to open the sinus without doing the radical operation he did not care to make an opening into the mouth because re-inoculation from the mouth often took place and the suppurative abscess continued indefinitely.—The President exhibited an Aural Case for Diagnosis.—Mr. H. Clayton Fox suggested that the lesion might be keloidal formation secondary to some small cicatrix.—Mr. D. J. E. McDougall (Liverpool) said that the case seemed to be one of chronic furuncular inflammation and that thorough scraping would probably cure it. He considered that there was no appearance of keloid.—Dr. Wingrave, in showing some microscopical specimens, said that he intended to comment on only one of them—namely, that of tuberculous cervical lymphatic glands. After examining a large number of such cases he was extremely doubtful as to why they should be called tuberculous. He had stained that specimen and a number of others most carefully, hoping to find evidence of tubercle bacilli, but had not been successful. The same remark would apply equally well to lupus. In which no tubercle bacilli were found. On examining those glands, particularly those which were removed before there was any suppuration, no definite sign of tubercle

quickly recovered from the effects of the pain and in a few days was about again till she had a recurrence. Several attacks might follow each other and at last a more severe attack in which the diagnostic symptoms presented more characteristic features. Dr. Tate described two typical examples of tubal gestation. The first was a severe form where copious internal bleeding occurred. This class if not dealt with at the time or if the patient did not succumb passed on to pelvic hæmatocele. The second were cases where hæmorrhage was slight, the blood round the outer end of the pregnant tube or round a lacerated tube giving rise to conditions known as peri-tubal or para-tubal hæmatocele. The differential diagnosis was discussed, the commonest errors of diagnosis being: (1) from ordinary miscarriage; and (2) from pelvic inflammation. Occasionally the cases were mistaken for incarcerated retroverted gravid uterus. As regards treatment, cases should not be treated as pregnancy but as a new growth. In the first class of case, where hæmorrhage was severe, there was no question that patients should be treated on the great surgical rule in the treatment of hæmorrhage—viz., secure the bleeding point, which in this particular case was some part of the pregnant tube. Abdominal section should therefore be at once performed. In cases of pelvic hæmatocele where bleeding had occurred more gradually and gravitated into Douglas's pouch or in which the hæmorrhage, though sudden and severe at first, had gradually become roofed in by adherent bowel the treatment was debatable. When seen within a week or so after occurrence of the bleeding abdominal section was recommended. When a case came under notice when more than ten days had elapsed since the attack the adhesions of the bowel to the blood clot were much more firm and organised and any operation to remove blood clot was unsatisfactory. In such a case it was better to keep the patient in bed and watch for any indications for surgical interference.

LIVERPOOL MEDICAL INSTITUTION.—The first pathological meeting of the session of this society was held on Nov. 10th, Dr. James Barr, the President, being in the chair.—Dr. W. Murray Cairns exhibited with a radiograph a Fœtus showing Congenital Malformation of the Limbs.—Dr. Hubert Armstrong considered the specimen to be one of achondroplasia as shown by the slightly enlarged cranium, the pug nose with depression at the root, normal trunk but stunted limbs, and want of differentiation in the length of the fingers. If a child with this disease lived it became one of the types of dwarfs exemplified in the statuettes of one of the ancient Egyptian gods and in many of the pictures by old masters of court pageants and the like.—Dr. K. A. Grossmann showed microscopic sections of Subconjunctival Tumours. In the pharynx, tonsils, neck, and trunk were similar tumours; the structure in all was of the same nature, a small round-celled growth. The growths were probably not sarcomatous but of a lymphadenomatous nature.—Dr. W. Carter showed the Lungs and Heart of a patient in which the middle and lower branches of the right pulmonary artery were the seat of an organised blood clot; the patient lived 14 days after the condition was diagnosed.—Dr. W. B. Warrington showed a microscopical preparation of a Tumour removed during life from within the Dura Mater around the Cauda Equina.—Mr. E. M. Stockdale considered the tumour to be a hæmangio-sarcoma, an opinion shared by Dr. Warrington. The symptoms of the patient had improved considerably after the first operation but had now returned. From the nature of the tumour a second operation did not seem advisable.—Mr. George G. Hamilton showed a Carcinoma of the Rectum removed from a girl, aged 20 years.—Dr. E. E. Glynn mentioned that in the last five years five cases of cancer in persons under 28 years of age had occurred at the Royal Infirmary.—Dr. W. Gordon Little read a note of an original investigation undertaken by himself and Dr. Charles Harris in the Bio-Chemical Department of the Johnston Laboratories on the Influence of certain Inorganic Salts on the Solubility of Uric Acid and Biurate of Sodium. The salts used in these experiments were the chloride, bromide, iodide, fluoride, sulphate, salicylate, lactate, phosphate, and carbonate of sodium, potassium, and ammonium. The sodium and ammonium salts were found, even in small percentages, to diminish largely the solvent power of water; potassium salts, on the contrary, did not have this effect and might even increase the solvent power of water. The effect of the presence of sodium chloride in counteracting the known solvent action on uric acid of lithium, piperazin, and urotropin was demonstrated. The presence of sodium salts in the body fluids constituted the great difficulty which had to be overcome in the search for an agent to prevent the precipitation of the biurate of sodium. The paper, which was greatly appreciated by the members, was illustrated by diagrams.—Professor Benjamin Moore and others joined in the discussion.—Professor R. W. Boyce gave an exhibition and demonstration of Bones and Skulls of Ancient Egyptians. The valuable specimens shown dated back to 2300 B.C. and were in a splendid state of preservation. Osteoarthritis was seen to be a not uncommon disease, fracture of the ulna was frequently met with, and several examples of ulceration of bone, possibly syphilitic, were shown.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on Nov. 8th, Sir William J. Collins, the President, being in the chair.—The President deplored the decease of Mr. C. H. Hopwood, K.C. (a Vice-President). He also hoped that a standing committee might be appointed from the society to keep watch and ward over medico-legal abuses and reforms.—Dr. T. Claye Shaw discussed an Obscure Form of Alcoholism involving Irresponsibility, quoting actual instances where, after alcohol had been stopped, acts were done in a state of quasi-somnambulism comparable to the occasional sequelæ of shock and stunning. He considered that punishment often acted medicinally.—Dr. Louise Appel narrated the Hindu (subjective) method of approaching the question of responsibility.—Mr. John Troutbeck held that a complete physical and mental examination should precede the trial of many prisoners. The court often convicted in ignorance.—Dr. Lewis Lewis agreed; he had known epileptics who had committed criminal acts after "recovery"; he considered business worry as the commonest cause of suicide.—Dr. F. S. Toogood found that two-thirds of the lunatics admitted into the Lewisham Infirmary were cured by a fortnight's detention therein; hallucinations might persist after delirium tremens.—The President thought that the lawyer held a statical, the medical man a dynamical view of responsibility; from extended experience he concluded that the sudden abstinence from alcohol did not precipitate delirium tremens.—Dr. Claye Shaw, in reply, said that it was not only the lawyer whose knowledge of medicine was deficient, but also the medical men have a deficient knowledge of law.—Dr. Stanley B. Atkinson enumerated Definitions of Accident and Accidental as they arose in the coroner's court, insurance policies, and Compensation Acts.—Mr. A. D. Cowburn cited cases of shock and held that fright and terror might have organic as well as functional ill-effects.—Mr. F. Thoresby said that insurance companies were much exercised, after recent decisions, as to what was an accident; he also instanced the solatium of Scots' law.—The President outlined an ascending scale of illustrations, which would culminate in the obvious accident.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Nov. 4th.—Mr. Arthur H. Cheatle and Dr. W. d'E. Emery exhibited a most interesting specimen of Actinomycosis in the Tonsil of a female child, together with bacteriological sections.—It was agreed that this was probably the second case only which had ever been recorded of actinomycosis in that region.—Several specimens of Malignant Disease in the Upper Air-passages of the Dog and Cat were shown by Professor F. Hobday and Mr. P. R. W. de Santi and an interesting case of probably Extrinsic Malignant Disease of the Larynx in a man, aged 64 years, by Dr. E. Furniss Potter. The case was unusual in the fact that it had lasted some 18 months without any glandular infection. It was looked upon as a particularly suitable case for laryngectomy.—An interesting specimen of a Foreign Body, a collar stud, was brought forward by Dr. Paterson, the foreign body having been removed by direct laryngoscopy, Killian's method, from a child, aged 12 months.—Mr. E. B. Waggett brought forward a diagnostic specimen from an Œsophageal Stricture removed by Killian's method. He pointed out that œsophagoscopy in England seemed not to be as well known as a method of diagnosing strictures of the œsophagus as it should be.—Mr. de Santi showed a case of Curious Erythema of the Soft Palate and Tonsillar Region in a girl. The question was as to the nature of the trouble. One or two members looked upon the case, though unique, as probably of the nature of angioma.—Dr. W. H. Kelson showed a case of Laryngeal Growth in a boy, aged six years, the interest of which was that the growth had been removed in the sitting-up posture by endolaryngeal forceps and deep

anæsthesia —Mr H Betham Robinson showed a case of Pharyngeal Obstruction from a diaphragm which stretched between the back of the tongue and the posterior wall of the pharynx —Dr E Law showed a case of Stenosis of the Trachea, ozæmic in nature, and Dr J. Dundas Grant showed a microscopic slide of an Extrinsic Laryngeal Growth, the diagnosis resting between sarcoma and fibroma

PATHOLOGICAL SOCIETY OF MANCHESTER —A meeting of this society was held on Nov 9th Dr E S Reynolds being in the chair and afterwards Professor J Lorrain Smith —Professor Lorrain Smith related some observations on the Amount of Hæmoglobin in Cases of Leucocythæmia —Dr W E Lothergill exhibited microscopic sections of two small solid Ovarian Tumours composed of minute tubular alveoli lined by columnar epithelium These resembled in structure certain adenomata which had been found on the posterior body wall in a retro peritoneal position, in the broad ligament and also at the sides of the cervix uteri They were probably derived from pronephric or mesonephric tubules distinct from those which formed the Wolffian body —Dr C H Melland described and showed specimens of Biliary Cirrhosis, &c —Dr W J S Bythell exhibited two microscopic slides of Streptococci and Pneumococci from cases of empyema in children, the specimens being accompanied by microphotographs taken in natural colours by the Sanger Shepherd process to illustrate the staining reactions due to degeneration of the cocci —Other preparations were shown as card specimens

MIDLAND MEDICAL SOCIETY —A meeting of this society was held at the Medical Institute, Birmingham, on Nov 9th, Mr Wood White, the President, being in the chair —Dr A S Barnes showed a specimen of Operable Cerebral Sarcoma —Dr W Allport showed a specimen of Detachment of the Retina —Mr C G Higginson read a paper entitled 'The Open air Treatment of Phthisis Fifty Years Ago '

Reviews and Notices of Books.

Handbook of Meat Inspection By ROBERT OSTERTAG M D, Professor of Veterinary High School at Berlin Translated by E VERNON WILCOX M A Ph D Veterinary Editor, *Experimental Station Record* With an Introduction by JOHN R MOHLER, M A, D V M Chief of Pathological Division United States Bureau of Animal Industry London Baillière, Tindall and Cox 1904 Pp xxxv -884

THIS volume which is an American translation of Dr Ostertag s well known standard work on meat inspection, will be welcome throughout the English speaking scientific world Books upon meat inspection and the diseases of animals are none too numerous or thorough in the English tongue and hence the pre ent excellent translation supplies a distinct want It is however, somewhat to be regretted that the last edition of Dr Ostertag s work, which appeared in 1902 was not translated at once, although this delay cannot be said to detract materially from the value of the present volume That the translation is the work of an American is soon apparent to the reader from the use of such spelling as color and "odor and the employment of aside in place of ' besides, and so on

Dr Mohler s introduction which deals with the history and present state of meat inspection in the United States is highly instructive and it shows among other things how admirably the Americans have adapted themselves to the European demands in the direction of the inspection of meat and the microscopical examination of the pork intended for introduction into Germany The advances which America has made in the matter of both ante and post mortem examination are due almost solely to the work of the Bureau of Animal Industry, of which Dr D E Salmon is the distinguished chief

The first chapter of Dr Ostertag s book furnishes a general discussion on meat inspection and in it the author refers to the pertinacity with which the Germans, notwithstanding the numerous and disastrous outbreaks of trichinosis which have occurred, still persist in eating uncooked pork, and he quotes Gerlach to the effect that " there is no more convincing proof of the everlasting unreasonableness of man in certain things than that furnished in trichino is " In discussing the foods of different nations Dr Ostertag observes that ' meat is indispensable for the majority of human beings if they are to remain capable of a normal amount of work but it is not quite clear whether the author is here referring to Europe alone or to the world at large If to the latter the statement would appear to require some qualification, as, presumably something like 50 per cent of the population of the world subsist mainly upon a vegetarian diet and a noteworthy discussion on this question in its social aspects is to be found in Buckle s work on the ' History of Civilisation " It is however, interesting at the present juncture to record that according to the work before us, the consumption of the meat of domesticated animals was forbidden in Japan after the introduction of Buddhism in the seventh century A D but that the slaughter of animals was resumed after the introduction of foreigners into Japan At first only the foreigners ate meat but the Japanese have gradually accustomed themselves to animal food and in the ' eighties it was introduced into the Japanese army There is so much in this book which is full of interest that it is difficult to desist from quoting freely more especially in relation to that part of the volume which deals with the history of meat inspection

The chapter concerned with the laws regulating the traffic in meat in Germany is although of main interest to dwellers of the Fatherland helpful in showing how much we in this country may still learn from Germany in this respect The Art of Butchering' is also well set out and there are some capital diagrams showing the several parts of the carcasses of oxen sheep, and pigs while the subject of the inspection of imported meat which is of great importance to the English reader is very fully treated of in the present volume The work would not be of German origin were not the chapter on Animal Parasites a very full one, some of the plates in this section being excellent In the section on infectious diseases the description of tuberculosis is probably the most helpful and it is interesting to note that the increase of tuberculosis among hogs in North Germany is attributed to feeding them on the raw products of the creamery and more particularly to the use of the deposit collected from the separators after the separation of the cream from the milk has been carried out In Denmark it has we believe been the custom for many years to burn such refuse As regards the communicability of bovine tuberculosis to man Dr Ostertag is disinclined to go so far as Professor Koch and he evidently thinks that steps should be taken to prevent such an occurrence The subject of Botulism naturally receives full treatment at the hands of Dr Ostertag but we are sorry to find that the few paragraphs which are devoted to the subject of oyster borne disease are sadly out of date Apparently the author accepts the view of Bardet that all oysters are diseased during the summer ' a statement for which there is certainly no adequate foundation in fact while no reference whatever seems to be made to the possibility of contracting enteric fever from eating oysters The section which deals with the colouring of meat has special concern for the consumers of German sausages, and that on the preservation of meat has a world wide application

There is no doubt that this book which is the standard work on the subject, should be in the library of every medical officer of health who takes an interest in his work The near future will see a very great and general advance in the control of the food supplies of the people and books

the poorer class of sufferers from pulmonary tuberculosis. Possibly the lecture on Disinfecting might be improved by more specific directions being laid down and mention being made of the most modern forms of sputum cups, with hints as to where to obtain them.

Guide Pratique et Formulaire pour les Maladies de la Bouche et des Dents, suivi du Manuel Opératoire de l'Anesthésie par la Cocaine en Chirurgie Dentaire. By G. VIAU. Third edition. Paris: F. R. de Rudeval. 1904. Pp. 522. Price 6 francs.—This useful work consists of two parts—the first a dictionary of the diseases of the teeth and the mouth and the second an account of cocaine as an anæsthetic in dental surgery. The different subjects are well and carefully dealt with and numerous prescriptions are given for use in the treatment of the various diseases. Over 100 pages are devoted to cocaine, a full history of the drug being followed by an account of its pharmacology. The physiological properties are next discussed with the mode of administration and the accidents that may occur during, or follow, its use. To the busy practitioner this book should prove of utility.

Looking Back.

FROM

THE LANCET, *SATURDAY*, NOV. 18, 1826.

FOREIGN DEPARTMENT.

ANATOMY.

Paper on the Glands situated in the Head of the Serpent. By Y. F. MECKEL, Professor of Anatomy and Physiology, at the University of Halle.*

THE glands in the heads of serpents are particularly interesting from the poison which they secrete. They have been, during the last few years, the object of the researches of several anatomists, especially of Tiedemann, Cloquet, Rudolphi, and Desmoulins, who have described some with greater or less accuracy, and have confounded the others. Some of them have also been described by preceding observers, as Charas, Redi, Ranby, Fontana, and Cuvier; the discrepancy that exists between these reports has induced Meckel to examine the subject with the attention which it merits, and to publish the results of his investigations.

Five pairs of glands are found in the heads of serpents—but not, however, in all the species; of these glands the most constantly observable is a small elongated and rounded one, situated in the inferior part of the mouth near its anterior extremity, and which opens at the sheath of the tongue. This has been on just grounds considered as analogous to the sublingual gland in other animals.

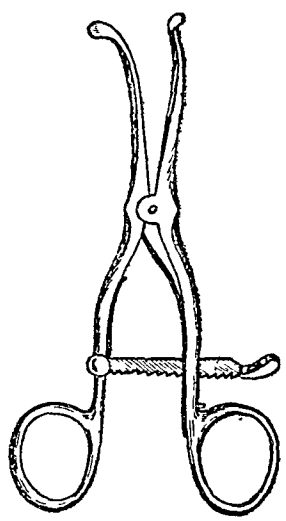
The most remarkable, though the least common, of the glands, are unquestionably those which secrete the poisonous fluid. These are always situated behind and beneath the eyes, above the upper jaw, completely surrounded and invested by a very strong muscle, which must be dissected off in order to get a view of them. Their form is elongated, their texture lamellated, presenting internally a cavity. They are, moreover, distinguished from all the other glands by their excretory duct. This is of considerable size; its direction is from behind forwards, along the external surface of the upper jaw, and finally opens immediately before, and above the venomous tooth. It is contained within a membranous sheath, which invests it in such a way, that the poison is directed into the superior aperture of the tooth. The situation and peculiar manner in which these glands are invested by the thin muscular covering, will in some degree account for their having eluded the search of the older anatomists. Charas appears to have been acquainted only with the lachrymal and ocular glands, at least it is to these only that his descriptions apply. He says that they are situated in the posterior part of the orbits, behind and beneath the eyes; that they are composed of several lobes, partly covered by the temporal muscle, and that they are nearly of the same size as the eye. He appears, however, to have observed the excretory duct of the poisonous glands, but he has made a mistake in describing it, as being connected with, or proceeding from, the glands just described. As far as can be judged by his figures and descriptions Ranby (Phil. Trans. No. 401, p. 378) appears to be the first who examined the venomous gland itself, for he described and delineated a gland in the rattle snake of the size of a pea, placed precisely in the situation of the poison gland; but he could not have observed its excretory duct, for he says that the ducts of such small glands can never be *distinctly* seen; but he conjectured that it opened between the upper lip and the superior maxilla. He agreed with Charas in the opinion that these glands do not secrete the poison; but the experiments of Redi have long since set that question at rest, and have demonstrated that they are the true secretory organ of the poisonous fluid.

Fontana is the first who described with clearness and precision the secretory apparatus of the poison. And then it was Russell, if I am not deceived, who also gave accurate descriptions and plates which I saw a long time ago at Paris and Gottingen, but which, unfortunately, I have not now before me. M. Cuvier has ably exposed this point. P. Tiedemann has also seen with precision, in the naja and vipera berus, all the parts in their connexion. The descriptions and drawings of P. Rudolphi are exact, but the representation of the orifice of the excretory duct, and its relation with the poisonous tooth, are wanting. Moreover, if I attribute to Fontana the complete discovery of the apparatus for the secretion of the poison, I am obliged to differ from P. Rudolphi, who thinks that he was the first who had shown the course of the poison, from the superior opening of the tooth to its lower aperture. This discovery belongs to the excellent Tyson, and has already been confirmed by Ranby. The first of these two authors says expressly, that he has found in all these teeth, very near the root, a large opening, and towards the point a septum always very distinct; that the tooth is crossed between these two openings, which he had remarked several times, by lightly pressing the gums with the fingers; by this pressure, the poison had been distinctly seen extending from the tooth, and the slit in it. Ranby describes the two openings, and the cavity, as Tyson; and he adds that the superior, probably, receives the poison, (secreted, according to him, in the sheath of the tooth,) whilst the the lower ones transmit it into the wound.

These expressions are, undoubtedly, less precise than those of Tyson; but the words of the latter clearly indicate that he first discovered the passage of the poison across the tooth.

* Meckel's Archiv, April, 1826.

New Inventions.



A SELF-RETAINING TRACHEAL DILATOR.

THE accompanying illustration shows a tracheal dilator that I have recently had made for me by the Holborn Surgical Instrument Company. By means of the rachet the trachea can be dilated to the required extent and the instrument is self-retaining, allowing the surgeon to use both his hands freely during the operation.

DOUGLAS DREW,
Senior Surgeon to the North Eastern Hospital for Children, &c.
Harley-street, W.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Carmichael prize of £120 for the best essay on the State of the Medical Profession in its Different Departments has been awarded by the College to Dr. Michael Foster Reaney of Manchester.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 19, 1904.

Vagrancy and Small-pox.

THE prevalence of small-pox during the past few years has again directed attention to the important part played by the habitual vagrant in disseminating that disease. There is no evidence that the physical condition of the tramp and the street loafer, though often of a low standard in consequence of his origin, mode of life, and surroundings, renders him an individual specially susceptible to small-pox. But his opportunities of contracting the disease are far more numerous than those of the ordinary citizen, and if he goes his way while suffering from a mild attack of small-pox—a not infrequent occurrence—he often spreads the disease broadcast in public-houses, casual wards, Salvation Army shelters, common lodging-houses, and other places to which he resorts. The mischief done in this way was abundantly illustrated in London two years ago and it is certain that had it not been for the energetic watchfulness which the medical departments of the London County Council and metropolitan borough councils then bestowed on persons of this class the extent of the recent epidemic in the metropolis would have been much greater than it was. Since 1902 small-pox has spread to many centres in the provinces and it has been found time and again that the first importation of the disease into a district has been attributable to tramps, that subsequent importations have been due to the same cause, and that within the invaded district the loafer and the wastrel have been largely responsible for the continued prevalence of the epidemic. This aspect of small-pox epidemics in provincial centres has been carefully studied by Dr. HENRY E ARMSTRONG of Newcastle-on-Tyne who recently collected a mass of information on the subject from various parts of the country which he incorporated in a valuable report published a few months ago. On the initiative of Newcastle the London County Council decided to invite representatives of county councils and county boroughs and of other authorities concerned to a conference to discuss vagrancy in relation to infectious disease. This conference was held on Nov. 10th and the importance of the subject was emphasised by the large and representative attendance and by the interest taken in the proceedings. A long series of motions was adopted and a committee was appointed to place the views of the conference before the Local Government Board and the inter-departmental committee on vagrancy, and also to obtain Parliamentary support.

The members of the conference evidently held the opinion, which few will be inclined to dispute, that the rights of the habitual vagrant to personal liberty may be set aside without hesitation where questions of public health and public convenience are concerned. They ask that powers of compulsion should be given to detain him when reasonably suspected to be liable to convey infectious disease, to vaccinate or to revaccinate him, to cleanse his person, and to disinfect his clothing. They ask also that similar powers should be available in respect of inmates of common lodging-houses, whether vagrants or not, and they demand powers to enable the sanitary authority of a district to require the keeper of any common lodging-house to refuse the admission of new lodgers or, if necessary, to close the lodging-house altogether. Even in present circumstances some of these measures (for example, in regard to common lodging-houses) are often adopted by medical officers of health who, with the support of their councils, manage to secure all that is needed by informal action or by voluntary agreement. But it may be assumed that compulsory powers would greatly strengthen the hands of medical officers of health in these directions and if this be so a strong case for legislation has evidently been made out and the proposals of the conference should receive general support. Local sanitary administration being what it is, however, it is to be feared that if all local authorities were possessed of the powers asked for the efficiency of their administration would continue to be very unequal. Recent experience in the provinces has shown how much every sanitary district is obliged to depend on the action of its neighbours for protection against the invasion of small-pox. As a practical matter, therefore, it is well to realise that control of vagrants in epidemic times can be at best imperfectly secured by mere individual action of sanitary authorities and boards of guardians. Uniformity of method and practice is essential for the purpose and we believe that some system for coördinating the work of local authorities in large areas would be necessary in order to insure success. In this respect we think that the suggestion made by Dr. J. S. CAMERON of grouping counties for the purpose of combined action deserves careful consideration.

The conference did a further service by adding the weight of its authority to the demand for investigation of the causes of vagrancy in this country and of the methods best suited to its repression. It is stated, and was affirmed by the conference, that habitual vagrancy has of late years increased to an alarming extent. The definition of a habitual vagrant is difficult and we suspect that accurate statistical information on the prevalence of vagrancy is not easy to come by. But whatever the figures may be it is certain that the tramp nuisance in many parts of the country is now a serious one. In our present state of law and administration nothing appears to deter the confirmed tramp. Usually he seems to have no objection to the short sentences of "hard labour" which he so frequently earns: he is fed in the prison, the labour is often lighter than it is in the casual ward, and he is soon at large again. Anthropologists and sociologists may classify the tramp as a reversion to the nomadic type, as a "degenerate," as feeble-minded, or in any way they please, but the fact remains that he is an unmitigated nuisance and in one way or another a continual source of expense to the country. Moreover, one of the strongest objections to the habitual vagrant is the enormous difficulty which he creates when any organised attempt is made to assist the genuinely unemployed or the man who is travelling *bonâ fide* in search of work. Abroad the vagrancy question has received a great deal of attention in

recent years. Various methods have been devised, as in Switzerland, for helping on his road the man genuinely in search of work and for severely punishing the loafer and the beggar. "Labour colonies" have been established in Germany and Belgium. where large numbers of would-be vagrants are detained, under greater or less compulsion, and are encouraged or obliged to perform simple manual work appropriate to their capacities. One of these, the Merxplas colony in Belgium, which deals with some 5000 men, is said to be in many ways remarkably successful. It is not claimed that this colony will admit vagrants and beggars and return them to the world transformed into useful citizens. But they are prevented from being a public nuisance and they live a life of some utility at a less cost to the community, it is said, than is entailed by our British methods or rather by our lack of methods. In this country the conditions of labour and labour markets, of police supervision, and of local government differ so greatly from those which obtain on the continent that it would be hardly reasonable to demand the immediate adoption here of labour colonies and like systems on the ground that they have apparently had good results in Belgium or Switzerland. But it is evident that careful study of continental experience is essential in order to devise a practical scheme for dealing with vagrancy and the declarations of the conference will in this sense command general assent.

Whatever measures may ultimately be taken to control habitual vagrants, it must not be forgotten that, as regards small-pox, these undesirables form only a portion of the migratory populations which in epidemic times are liable to spread the disease. If all tramps and loafers could be placed in suitable colonies it would still be necessary, in the present state of our vaccination law, to guard against the spread of small-pox by the movements of casual labourers, navvies, hawkers, travelling showmen, harvesters, hop-pickers, fruit-pickers, and many other persons whose wanderings it is impossible to restrict but who live under conditions often very similar to those of the habitual tramp. Germany owes her immunity from small-pox not to absence of tramps or to labour colonies but to her revaccination system. If we cannot have the German system here we can at least see that in times of epidemic small-pox the sanitary authorities concerned in the suppression of the disease are provided with every possible facility for promoting vaccination. From this point of view it is to be regretted that the conference, by deciding to limit its discussion strictly to vagrants, was deprived of the opportunity of recording any opinion on the unsatisfactory condition of the present vaccination laws in their application to epidemic small-pox.

The Future Supply of Midwives.

A MEETING was held on Nov. 4th at the Westminster Palace Hotel, by the Association for Promoting the Training and Supply of Midwives, at which the ARCHBISHOP of CANTERBURY presided and at which many persons who take an interest in the working of the Midwives Act, 1902, were present, including representatives of a large number of local authorities. As will be seen from our report of the meeting in THE LANCET of Nov. 12th, p. 1373, business-like speeches were made by persons able to estimate the importance of the problem. The Midwives Act came into operation on April 1st, 1903; any woman then in practice as a midwife and bearing a good character can, without further qualification, be placed upon the roll of midwives kept by the Central Midwives Board if she claims her right to be registered before April 1st, 1905. After that date no woman not upon the roll may use the title of midwife or any name or title implying that she holds the certificate of the Board, and from and after April 1st, 1910, "no woman shall habitually and for gain attend women in childbirth otherwise than under the direction of a qualified medical practitioner unless she be certified." All women not in practice as midwives before April, 1903, must undergo the training and pass the examinations prescribed by the Central Midwives Board before seeking to obtain its certificate and admission to the roll of which the Board is the custodian. Three-quarters of the women already in practice as midwives have not sought registration, owing to a distaste on their part for the regulations and restrictions imposed by the Board in the interest of the parturient poor; and as these, though they may practise without using the name of midwife for the present, will have to cease from doing so in a little more than five years' time the need for considering the question as to who are to replace them may fairly be considered imminent, and the topic is one of considerable interest to a large section of the public as well as to the medical profession.

In these circumstances a motion was proposed by Dr. C. J. CULLINGWORTH, a member of the Central Midwives Board, which was supported by its chairman, Dr. F. H. CHAMPNEYS, as well as by other speakers, to the effect that urgent need exists in this country for a supply of properly trained midwives who, in working in conformity with the provisions of the Midwives Act, 1902, will help to reduce the present high mortality of lying-in mothers and their children amongst the poor. The motion, which ended with an expression of goodwill towards the Association for Promoting the Training and Supply of Midwives, was carried and is, it is to be hoped, the preliminary to practical steps towards the fulfilment of a task which is not likely to be a light one. The Midwives Act is so framed that it is beyond question capable of achieving one very desirable object. Under it the practice of midwifery by the dirty and incompetent Gamp to the danger of her patients should be rendered impossible. Whether her place will be, or can be, filled by the trained and efficient person whom it is the duty of the Central Midwives Board to examine and to register is another matter. A certain number of women capable of receiving and assimilating the necessary instruction, and not altogether dependent on their earnings for their support, will no doubt be found, and the charitable will be able to provide for a few others incomes equal to their requirements, but when it is considered that 60 per cent. of the childbirths annually taking place in the country have been attended by women only it seems too much to expect that the benevolence of the wealthy will provide more than a small proportion of the aid required. The bulk therefore

of the future midwives who come forward for training as such will have to do so relying upon their earnings in the calling which they intend to adopt being wholly or nearly sufficient for their maintenance, and if the chances of making a decent living as a midwife are small the number of those seeking it will be small also The handy woman who has attended confinements hitherto has in a great number of instances either done so in order to supplement her earnings from other sources or those of her husband or if she has been principally a midwife has, nevertheless had other occupations as well The woman who has gone through the necessary training imposed by the Central Midwives Board will not belong to this class She will not go out charing or take in washing in the intervals between confinements and she will not be able to undertake other nursing, as a rule without the risks of interfering with her business as a midwife

These facts bring the public face to face with a position which must have been anticipated by those who read our numerous articles upon this difficult question before the passing of the Act To the medical man in general practice midwifery among the poor represents an arduous and ill paid portion of the duties which fill his days and often his nights There was little or no pecuniary motive at the bottom of the dislike which many practitioners felt, and feel, towards the State registration of midwives, and no medical man will envy the midwife in her attempt to live by midwifery alone The training and supply of midwives especially the keeping up the supply of candidates, is proving a more costly and difficult operation than had been anticipated by the promoters of legislation To the work of the Association for Promoting the Training and Supply of Midwives sympathy will doubtless be extended Unless its efforts are successful the working of the Midwives Act will be seriously jeopardised

Drink and Labour.

MR JOHN BURNS, M P, L C C, has lately embarked on an undertaking in which it is impossible not to wish him the most signal and complete success It is an endeavour to bring home to the working and artisan classes of this country some definite idea of the suffering and degradation which are entailed upon them even by the use, and necessarily still more by the abuse, of intoxicating drinks Mr BURNS's latest effort in this direction was by the delivery of a lecture, on Oct 31st, in the Free Trade Hall at Manchester, to a large working class audience, and he was not wanting in the courage of his convictions The energy of his language, indeed, almost suggests comparison with that in which King JAMES I denounced the practice of smoking tobacco This was, he said, "a custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof nearest resembling the horrible Stygian smoke of the pit that is bottomless' "The tavern,' says Mr BURNS, "has for centuries been the antechamber to the workhouse, the chapel of ease to the asylum, the recruiting station for the hospital, the rendezvous of the gambler, the gathering ground for the gaol Alcohol pollutes whatever it touches It enervates where it does not enslave It destroys slowly what it does not degrade quickly For the individual it is a malignant disease, for the community it is a murrain for the nation it has become a self inflicted obstacle to all phases of progress Drinking is bad enough in the prosperous, but on the poor it is an additional load piled upon their own backs too often by their own hands and nearly always at the time they are least able to bear it From their strength as a class from their powers of endurance as individuals, and from their capacity as craftsmen it is a never ending drain It irritates where it does not brutalise, and makes for discord, strife, and bitterness, where calmness sobriety kindness, and decency should prevail It undermines manhood enervates maternity, and dissipates the best elements of human nature As was said of it by Lord BROUGHAM it is the mother of want and the nurse of crime' The indictment framed in these opening passages of the lecture is maintained in the sequel and Mr BURNS adduces pages of statistics and of tables, of the kind only too well known to us in order to exhibit in detail the consequences which he had previously described in outline His materials of this kind were perhaps a little too abundant and he sometimes retraced his steps in a manner not conducive to the perfect clearness of the picture which he intended to display If delivered as printed, the length of the lecture must have been such as to make no small demand upon the patience and the attention even of an educated audience Its influence, we think would depend less upon statistics than upon the vigour and the full conviction of the speaker, coupled with the force attaching to his example Mr BURNS declared himself to be 'a life abstainer from intoxicating liquor and said that his own knowledge of drunkenness consisted in being always sober He stood before his hearers as the object lesson in his own sermon as the man of their own rank who had raised himself to be a member of the legislature and whose life has been largely devoted to helping others to follow in his footsteps

When he approached the subject of a remedy for the evils which he had described Mr BURNS had little more to say than to recommend the practice of personal abstinence and the steady diminution of the number of houses licensed for the sale of drink He pointed out that Waterford has a licensed house for every 78 persons in its entire population, and that Battersea has one for every 650, with the coincidence or the result that the arrests for drunkenness during a year were 53 per 1000 of the inhabitants of the former place and less than 5 per 1000 of those of the latter On the basis of this and similar evidence from other places he poured scorn probably with perfect justice, upon the common contention that drunkenness is not increased by facilities for drinking, and he evidently looks forward to a progressive diminution of such facilities as an important measure of protection for the man who is too feeble or too self indulgent to protect himself He did not glance at the two chief facts which make for drunkenness in this country, the first being the importance attached by Chancellors of the Exchequer, of whatever party, to the large revenue which is easily derived from drink and which, if it were diminished by any important increase of temperance, would have to be replaced by the imposition of new taxes which might easily become sources of unpopularity to the Ministry imposing

them. The second fact of similar tendency is the self-protective organisation which renders the "trade" alike valuable as a collective political supporter and formidable as a collective political adversary. We are accustomed to hear from the Opposition eloquent denunciations of the subserviency of the Ministry to "King Bung," but no rational person entertains the smallest doubt that the Opposition, if in power, would be just as subservient in its turn. Both parties alike can entrench themselves behind the unassailable position that the drink traffic has been brought to its present condition by enactments which, on the whole, were correct expressions of the public opinion of the time at which they were passed and that anything which could be described as a measure of confiscation would be an unpardonable and impolitic assault upon the rights of property. The drink trade is the creation or at least the foster child of the law and it has been the milch cow of many successive governments. It would be impossible, with any regard for national honesty, to deprive its members of the status which they have been permitted or assisted to acquire.

We will venture upon a practical suggestion. Mr. BURNS has shown beyond dispute his complete recognition of the evils, both to the community and to the individual, which spring not only from intemperance but even from the habitual consumption of intoxicating liquor. He is deservedly a great power among trade unionists and he might probably bring his power to bear in the direction of creating among the working classes a public opinion favourable to abstinence. It surely would not be impossible for one or more of the great trade societies to revise their terms of admission in the direction of rendering them more favourable to abstainers than to others; and, if this were done, as it has been done by some insurance associations, there can be no doubt that the comparative immunity of the abstainer class from illness and accident would soon justify the rulers of such a society in proceeding a step further, and ultimately in requiring abstinence as a condition of membership. It would surely be also possible to form an alliance between one or more trade societies and a sufficient number of large employers, an alliance of such a kind that only abstainers should be employed at the works to which it applied. If this were done, the artisan classes would speedily be furnished with abundant evidence of the effect of abstinence in promoting comfort. The workers at the abstaining shops would afford perpetual testimony to the advantages of the system and their superior position, more especially with regard to domestic comfort and happiness, but also as measured by the quantity and quality of their output, could not fail to exert a powerful effect upon their comrades. Mr. BURNS knows the working classes even better than we can pretend to do; but few medical men are entirely unacquainted with their tendencies and peculiarities and we feel some confidence that measures of the kind described might be successfully adopted. In the character of outspoken friends we would make two more suggestions. Among the evils due to drink which Mr. BURNS did not enumerate there are at least two conspicuous ones, the personal uncleanliness of the British workman and the undeveloped state of his sense of duty to his employer or to his country. Nothing approaching to the dirtiness of the average English artisan and of his wife and family is to be seen in any other civilised country and the establishment of an abstaining workshop might well so increase the self-respect of those employed there as to lead them to require the same facilities for washing and for changing working clothes that are almost universally afforded in America. It might lead also to the development of a higher degree of moral sense than now commonly prevails and to a recognition that scamped work and neglect of duty are not only disgraceful in themselves but that they tend to a steady deterioration of the national industries in the face of constantly increasing competition. They are, in the workman, very much what cowardice before the enemy is in the case of the soldier.

Annotations.

"Ne quid nimis."

SCIENCE AND IMMORTALITY.

UNDER the above title Professor William Osler has published in book form[1] the Ingersoll lecture delivered by him at Harvard University on the Immortality of Man. We can recommend the volume not only for its literary charm but also for the thoughtful and suggestive discussion of the comforting conception of immortality from the standpoint of the scientific physician rather than from that of the philosopher or theologian. Lord Kelvin, in his interesting address to the students of St. George's Hospital on Oct. 28th, an account of which was published in THE LANCET of Nov. 5th, p. 1305, referred to the importance of the study of human nature to the physician and Professor Osler outlines from the point of view of the earnest and sympathetic student of mankind his conclusions as to the general belief in a future life. The two addresses might with advantage be read together as a corrective to the too materialistic conceptions to which science is apt to lead. Professor Osler thinks that the old triple classification of mankind from their attitude of mind to this great problem is helpful to the modern student and he discusses the three groups—the Laodiceans, the Gallionians, and the Teresians. The Laodicean attitude, neither hot nor cold but luke-warm—that is, an attitude of practical indifference—is that affected by the great bulk of people. "Immortality," says Professor Osler, "and all that it may mean is a dead issue in the great movements of the world. Does it ever enter into the consideration of those controlling the destinies of their fellow creatures that this life is only a preparation for another? To raise the question is to raise a smile." He quotes Emerson that the cheapness of man is every day's tragedy and asks whether, if we had any deep conviction that the many lives sacrificed in railway accidents, and even to sport, were living souls whose status in eternity depended on their belief at the moment of death, some fervid uprising would not occur. Again, the attitude of educated man at the moments preceding death is not, according to Professor Osler's study of the records of about 500 death-beds, one of fear but a "sleep and a forgetting," and man dies, as a rule, like Mr. Denner in Margaret Deland's story "John Ward, Preacher," wondering but uncertain, generally unconscious and unconcerned. The second group, who, like Gallio, care for none of these things, because after consideration from the intellectual or experimental standpoint

[1] Science and Immortality. London: Archibald Constable and Co., 1904.

they can find no confirmation for the belief in immortality, Professor Osler next discusses He shows how, according to modern science, organisation and intelligence go hand in hand so that the conception of the soul becomes a superfluity, and how to the scientific man the conception of intelligence apart from organisation is practically unthinkable, and then in one of the most charmingly worded sections of the book he outlines the idea of the morphological continuity of the germ plasm—the immortality of the flesh as he expresses it—and the scheme of nature, careless of the individual life but careful of the type The last class, the Teresians, those who walk by faith and not by sight, the idealists and the mystics, he contrasts with the foregoing classes, the indifferent and the realists He shows the power of the emotions, the happiness and brightness of the hope of the Teresian as compared with the doubt and indifference of the other classes, and concludes with his own confession of faith that he "had rather be mistaken with Plato than be in the right with those who deny altogether the life after death" Professor Osler's little book is worthy of him as a disciple of Sir Thomas Browne and we can only hope that this, a modern "Religio Medici," will be widely read and thoughtfully studied by both lay and medical readers

THE CIVIC CHAIR AND MEDICAL MEN

FEW medical men can find the necessary time to serve their fellow citizens by holding the office of mayor It is much to be regretted that this should be so The public is recognising more and more the importance of hygiene, and sanitary questions become almost daily of greater urgency, so that those communities are fortunate which have at the head of their respective municipal governments a medical man to guide them The medical officer of health may do good work but unless he receives the support of his authority his work to some extent will be wasted, and such support is the more likely to be given in municipalities where a medical man is at the head of affairs Up to the time of going to press we have been notified that five boroughs have elected members of the medical profession to the civic chair—namely Bangor, Dartmouth, Denbigh, Thetford, and Great Yarmouth Bangor has chosen Mr H Grey Edwards, M D , B Ch Dub , who has previously been mayor of the town Dr Grey Edwards was born in 1857 and was educated at Rossall School and Trinity College, Dublin, where he took degrees in arts and medicine and won the Surgical Travelling Scholarship He has been a member of the town council for many years and has taken a leading part in questions of sanitation Dartmouth has re elected Mr R B Searle, L R C P Lond M R C S Eng He was educated at King s College, London, where he distinguished himself in mathematics and medicine He has been in active practice for more than 40 years He was elected at the head of the poll as town councillor of Dartmouth seven years ago His term of office having expired in 1900 he did not seek re election but in 1903 he was asked by the town council to become its mayor and has been again re elected for 1904 Denbigh has re elected Mr David Lloyd, M B , C M. Glasg He was educated at the University of Glasgow and the Middlesex Hospital, London After having acted as county councillor for four years he was in 1903 elected mayor and has been re-elected this year Thetford has chosen Mr Allan G Minns, L R C P Lond , M R C S Eng He was born in 1858 in the Bahamas, West Indies, where he received his early education In 1879 he entered as a student at Guy s Hospital In 1884 he qualified and acted as assistant to his brother, Dr P R J B Minns, at Thetford In 1888 he was appointed medical officer to the Thetford Workhouse and to the Thetford district—appointments which he still holds Last year he was elected a municipal councillor and this year has accepted the office of chief magistrate. Yarmouth has elected Mr A C Mayo, M R C S Eng , L S A He received his early education from Mr John Hatton of Coleford In 1867 he entered at King s College, London, and having passed the examinations for the diplomas of the Society of Apothecaries and of the Royal College of Surgeons of England commenced general practice in partnership at Mildenham in Suffolk Later he went to Great Yarmouth and was appointed Admiralty surgeon the following year In 1880 he was appointed surgeon to Great Yarmouth Hospital In 1894 he became President of the East Anglian Branch of the British Medical Association Last year he represented the combined districts of North Suffolk and East Norfolk at the Swansea meeting of the British Medical Association and held the same office this year at Oxford His municipal life began in 1885 when he successfully contested the Regent Ward of Great Yarmouth, three years later he was made an alderman and justice of the peace for the borough and now he becomes mayor It is worthy of note that he was proposed as mayor by the leader of the Conservative party in Yarmouth, seconded by the Liberal leader, and elected unanimously

A REMARKABLE CASE OF HYSTERIA IN THE MALE

Dr S Weir Mitchell of Philadelphia and Dr William Spiller record in the *Journal of Nervous and Mental Disease* for October a remarkable case of hysteria in the male, lasting 30 years with post mortem examination The case was that of a man, by occupation a watchmaker, whose malady lasted without complication by any intercurrent illness and whose death was sudden "The conditions seemed to be ideally perfect I am aware of no other case of uncomplicated hysteria in which the search for causative lesions seemed to offer such an opportunity," says Dr Mitchell The patient s family history was neuropathic two of his five sisters were insane, an uncle had epilepsy, and a cousin was suffering from general paralysis As a child the patient was nervous, timid and reserved and although slow at his lessons was not lacking in intelligence At 17 years of age he had typhoid fever without complications or sequelæ At 25 years of age he had sun stroke and was insensible for two days but had no bad after effects except a life long over sensitiveness to the heat of the sun At 29 years of age he began to have some difficulty in his delicate handwork as a watchmaker, this was at one time a weakness of both hands and at another a momentary spastic condition of the left arm This trouble with his hands came and went Later he suffered from sudden attacks of weakness in the legs which came on while walking and arrested his steps but which passed off in a few moments With these occasional attacks of pain or in capacity of the hands and legs came also pain in the lumbar and cervical regions felt at times ever since The patient, says Dr Mitchell was refined, gentle and timid, but clearly intelligent and 'over willing for a time to exhibit the spasmodic symptoms Then abruptly his face would change, he would lose his constant smile, and be annoyed by our curiosity' He was free from organic disease, his senses were perfect, and his sleep was good The spasms or tremors of his left arm gradually attained greater amplitude and he swung it about in "pendulum" fashion with astonishing rhythmic regularity It was timed on several occasions and found to be moving at the rate of 160 oscillations per minute The rhythm of this movement varied, thus, if while standing he elevated and extended the right hand and arm to the shoulder level, instantly the rhythm mounted to 200 and when the right arm ceased to act the number fell again to 160. While these swinging spasms lasted he could execute no volitional act with the

matters in addition. Apart from the fact that to avoid injury to health the amount of alcohol consumed per diem should be limited strictly to one and a half fluid ounces, it cannot be regarded for practical purposes as a food in the sense of a true reparative. It is at best a producer of heat and energy and then frequently at the expense of healthy cellular activity, while its cost from the point of view of actual food value has been calculated to be eight times more than that of bread.

DISLOCATION OF THE ATLAS CAUSING PARALYSIS OF THE LEFT ARM AND SYRINGOMYELIC DISSOCIATION ON THE OPPOSITE SIDE.

IN the *American Journal of the Medical Sciences* for November Dr. J. H. Lloyd has reported a remarkable case. A man, aged 21 years, was admitted into hospital on Jan 12th, 1904. He was addicted to alcohol and on Sept. 16th, 1903, while drunk, was thrown from a car on his left shoulder; the wheel passed over the back of his neck. He was unconscious for some time and was taken to a hospital where fracture of the jaw was diagnosed but no spinal injury was noticed. After 12 days he was discharged. He then attended as an out-patient for an abscess of the jaw. During this time he was unable to rotate his head on his shoulders. On the day of his second admission into hospital while walking on a slippery path he fell on his left shoulder, striking the back of his head with great force. He was unconscious for five minutes and when he recovered he could not move any of his limbs. After half an hour he began to regain power but none returned to the left arm. On admission he was unable to stand. There was marked deformity of the neck. The head was held rigidly and twisted to one side. On the posterior wall of the pharynx a projecting mass could be felt. The left arm could not be moved but the forearm could be flexed and extended. The forearm could not be pronated or supinated. The thumb and index finger could be flexed and extended but the middle, ring, and index fingers could not be flexed and the fingers could not be separated. There was no muscular atrophy. Electrical examination showed only slight diminution of faradic irritability in the deltoid and pectoralis muscles. In the right upper limb there was marked loss of the thermic sense. In the rest of the right side the thermic sense was impaired from the fourth cervical vertebra downwards. There was also analgesia of the entire right side below the fourth cervical vertebra. Above was a hyperæsthetic area an inch wide and above this sensibility rapidly shaded to normal. There was tactile anæsthesia in the area of distribution of the great occipital nerve. The patient never showed signs of hysteria and the sensory phenomena were not transferable. In hospital the sensory symptoms improved and almost disappeared but the paralysis of the left arm persisted. In a skiagraph the atlas appeared to be displaced. The lesion must have been high in the neck, because the great occipital nerve is a branch of the second cervical which passes out between the atlas and axis. The paralysis of the arm was difficult to explain. The brachial plexus was far from the cervical lesion. The fact that the leg was not involved showed that the paralysis was not due to pressure on the lateral tract. Dislocation of the atlas is usually described as immediately fatal, but several well-authenticated cases have been recorded in which the patient lived for weeks and even for years. Mr. Jonathan Hutchinson has described a case of dislocation of the atlas and fracture of the odontoid process with survival for two years.[1] The diagnosis was confirmed by necropsy. In this case the atlas with the odontoid process was dislocated half an inch forwards and a little to the left. The odontoid process was fractured through the base and was ankylosed to the atlas and to the front of the axis in a new position. The lower articular parts of the atlas were pushed forward and downward and were ankylosed to the anterior surface of the axis. The axis and third cervical vertebra were also ankylosed. The displacement of the atlas forward was such that its posterior arch crossed the spinal canal. The portion of the canal in front through which the cord passed would not admit the tip of a child's little finger, so that the cord must have been much compressed. The patient subsequently became paralysed in motion and sensation. Probably the displacement slowly developed. Dr. Lloyd has previously recorded two cases of injury of the cervical cord simulating syringomyelia.[2] On the most injured side there were involvement of the motor tracts and tactile anæsthesia, while on the opposite side there were thermo-anæsthesia and analgesia. He thought that these cases showed that the fibres which conduct the sensations of heat, cold, and pain decussate in the grey matter and pass upwards in the antero-lateral tracts of the opposite side, whilst the fibres for touch pass upwards in the posterior column without decussating.

[1] Reports of the London Hospital, vol. iv., p. 210.

THE LESIONS OF THE NERVOUS SYSTEM CAUSED BY THE ACT OF BIRTH.

SOME of the nervous lesions and paralyses sustained by children in the act of birth are of a slight and temporary character, while others may be of serious nature, the effects lasting a lifetime and causing physical or mental incapacity of various kinds. In a discussion on this subject at the New York Neurological Society, of which an account is published in the *Journal of Nervous and Mental Disease* for October, Dr. L. Pierce Clark and Dr. A. S. Taylor of New York showed several cases illustrating the effects of obstetrical or birth palsy. The facts demonstrated in these cases were as follows: First, the most important etiological factor in the production of brachial birth palsy was direct or indirect tension of the nerve trunks with rupture of a few nerve fibres; secondly, the persistence of palsy was due to the destruction of axis cylinders and the formation of a new connective-tissue growth (a hyperplasia) between the torn nerve ends, through which nerve fibres could not regenerate; thirdly, the nature of the lesion in severe typical cases demanded excision of the damaged nerves and suture of the ends at the earliest possible moment, as in the treatment of peripheral nerve injuries elsewhere; fourthly, operation should not be delayed later than two or three months after birth; and fifthly, the surgical treatment should be followed by a system of massage, electricity, and systematised muscle movements. Dr. Clark and Dr. Taylor presented five cases of brachial birth palsy. Cases of such palsy were, they said, due to tension or compression of the fifth and sixth cervical nerve roots. "Tension probably played much the greater rôle in the causation, although both factors had been proven causative agents, both in clinical and experimental work." In all the cases that had come to their knowledge there had been either a history of traction or else this could not be excluded. This was the traction produced by the forcible depression of the shoulder, while the head was bent to the opposite side and rotated; in this the cervical nerve roots were overstretched, causing rupture of the nerve fibres over a considerable area. The lesion was always in the fifth and sixth nerve roots, frequently also in the seventh, and occasionally in the eighth and first dorsal nerves. During the past year Dr. Clark and Dr. Taylor had operated upon four cases; two proved fatal

[2] Journal of Nervous and Mental Diseases, June, 1894, p. 345, and Feb. 1900, p. 65.

owing to shock and the other two recovered from the operation and gradually improved Dr R Whitman described five cases in his care One of these was that of a little girl, aged nine years, who had a posterior rotation and dislocation of the shoulder and was the subject of partial muscular atrophy of the upper limb, rendering supination of the forearm and certain movements of the shoulder impossible By restoration of the bone to its joint and the use of proper surgical apparatus much of the lost power was regained but it was doubtful, stated Dr Whitman, whether that would ever restore the destroyed nerve fibres One of the five cases was that of a boy born after a 'dry' labour with the aid of forceps and after a great deal of traction had been made He was much asphyxiated and recovered with difficulty He showed a paralysis and progressive atrophy of the muscles of the right arm and a downward displacement of the humerus perhaps for half an inch The bones were also smaller and shorter in the affected limb than in the sound limb After operation on the brachial plexus and suture of the nerves there was return of function and much improvement followed Dr Bernard Sachs said that much benefit had been obtained by electrical treatment in cases under his personal care and that he did not approve of the risk of surgical operation if dislocation was proved to be absent

THE ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize being the income for one year of the bequest of the late Senor Alvarenga and amounting to about $180, will be made on July 14th, 1905 provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered Essays intended for competition may be upon any subject in medicine, but must not have been published, and must be received by the secretary of the College on or before May 1st, 1905 Each essay must be sent without signature but should be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and the address of the author It is a condition of competition that the successful essay, or a copy of it, shall remain in the possession of the College, other essays will be returned upon application within three months after the award The Alvarenga Prize for 1904 was not awarded, no essay of sufficient merit, in the judgment of the committee, having been submitted in competition

FATAL NITROBENZOL POISONING DUE TO ABSORPTION FROM SHOE BLACKING

IN the *Journal of the American Medical Association* of Oct 1st Dr W J Stone has reported a case which appears to be unique in the fact that death was due to absorption of nitrobenzol through the skin A man, aged 22 years, in good health, was taken suddenly ill at 12 30 A M, in a restaurant where he had gone for supper after a dance He remarked that he did not feel well and his friends noticed that he seemed very pale While standing up to put on his coat he became faint and fell Water thrown on his face revived him but he felt dizzy and vomited beer, crackers, and cheese which he had just taken He was taken home in a carriage at 2 A M He passed into a comatose state and at 3 30 his room mate, supposing that he was in a drunken stupor, sent for a medical man who found the patient in a state of collapse He was very pale his eyes were glazed, and his lips, ears, and finger tips were cyanotic The corneal reflex was absent The pulse was 130 and about one beat in 25 was dropped $\frac{1}{60}$th of a grain of strychnine and $\frac{1}{100}$th of a grain of apomorphine were injected hypodermically. At 4 45 a slight convulsion occurred, the left pupil suddenly dilated, and the heart stopped Six hours later a necropsy was made The skin and visible mucous membranes were very pale The lobes of the ears and finger tips were cyanotic The feet were coloured black The urine contained albumin and granular casts and the kidneys showed acute desquamative nephritis In the liver were found cloudy swelling and fatty degeneration of the cells It was subsequently ascertained that a few days before death the man bought a pair of black patent leather shoes with cloth tan uppers To the latter on the evening before the dance he applied a liquid blacking When he put on the shoes on the evening of the dance the uppers were not dry and stained his feet Blacking found in his room and the shoes emitted a strong odour not unlike that of oil of bitter almonds Analysis showed that the blacking and the uppers of the shoes contained nitrobenzol This is a powerful narcotic poison, the fatal dose being about one gramme Extensive parenchymatous degeneration may, as in this case, be produced in the kidneys and the liver

PATHOLOGY AT OXFORD

THE University of Oxford possesses an excellent pathological laboratory, perhaps one of the best arranged in the kingdom and the director of pathological studies has virtues corresponding with the facilities afforded for the teaching of his subject But of endowment there is practically none This is a state of affairs which all interested in the growing medical school at Oxford feel should be remedied without delay and strenuous attempts are being made by the University to obtain funds for the pathological department, the aim being the establishment of a professorship of pathology The money will have to be obtained from outside sources for it is an open secret that at the present time the funds of the University are all required in other directions A successful beginning however, has been made by those who are moving in the matter Lord Rosebery in his speech at the Oxford Colonial Club banquet on Nov 14th announced that the Rhodes trustees were prepared to grant £200 per annum for five years as an addition to the stipend of the reader in pathology This should encourage hope that the necessary sum will be forthcoming without long delay

ON DILATATION OF THE STOMACH AND GASTROPTOSIS

WE have received a reprint of a paper by Dr Robert Coleman Kemp published in the *Medical News* of New York of August 6th, 1904 embodying the results of observations on a number of cases of disease of the stomach, with especial reference to the value of the various methods of physical examination Dr Kemp deprecates the tendency to rely on the investigation of the gastric contents alone and to neglect that of the motor functions and position of the organ itself He regards the condition of gastric atony, or loss of tone of the muscles of the stomach, as a condition preceding dilatation and gastroptosis which may be looked upon as progressive stages or later results of the motor insufficiency In dilatation of the stomach without gastroptosis the muscular fibres first elongate in the vertical direction and the distance between the lesser and the greater curvature is thus increased, later the pylorus is displaced to the right but the lesser curvature maintains its relation to the diaphragm, whereas in gastroptosis the entire organ sinks so that the lesser curvature looks inwards (to the right) and the pylorus may be below the level of the umbilicus With gastroptosis, according to Dr Kemp, there is always associated some degree of dilatation He also regards gastroptosis as the chief cause of mucous colitis and the neurasthenia so frequently associated with it With regard to the comparative value of the methods of localising

to ameliorate. The researches on fatigue lately conducted by scientific observers showed that strength was lessened by continued effort even in moderate degree, and in spite of the difficulties attending the investigation of the effects of fatigue on the brain it is now definitely ascertained that excessive muscular effort lessened or even abolished the sensory power of the cerebral centres. It was also interesting to note that the imperfect attention of pupils so frequently recorded as evidence of brain weariness was simply an expression of imperfect brain power resulting from over-exertion and that brain fatigue commonly induced a failure of memory and of the power of grasping a subject. Physical or mental exercise, when indulged in to excess and not rendered complementary the one to the other, in the long run proved baneful to the mental or physical health of the individual. The individual who had undergone too early excessive mental strain found himself at a comparatively early age suffering from one of the numerous forms of neurasthenia, or, in other words, exhaustion from too early and excessive use of functions which ought in the life-history of the individual to have developed more gradually and at a later period. The present age was one of too early and too rapid mental growth—Dr. Hyslop would not, and could not, say mental development. The early and severe taxation upon the resources of the brain produced effects which were becoming more and more disastrous and explained why mental and cerebral diseases tended to appear at an earlier age and were characterised by great severity and lessened curability. The young, of course, must be suitably educated to fit them for the competition of modern life. As to the extent to which this should be carried in early childhood there was a discrepancy between the doctrinaires of the Education Department and the views of those possessing any knowledge of the laws of nature or who as physicians dealt with cases of disease arising from the violation of these laws. The red-tape officialism of the Education Department was often supreme over medical experience and hence it came about that the physician must still raise his protesting voice as long as children before the age of puberty were overworked into disease or death. Undoubtedly the first years of life should be mainly occupied by moral and physical training and during that period the amount of mental cultivation which a child's brain was capable of receiving with permanent advantage was much less than was commonly believed. Hence arose a very important practical question in connexion with compulsory elementary education. A large proportion of those who must come within the provisions of the educational department in most large cities were ill-fed children of the poorest classes, and children thus debilitated by privation were necessarily as much incapacitated for any mental strain as they were for the accomplishment of any feat of physical strength. Dr. Hyslop declared that he was by no means alone in saying that it was inhuman, injudicious, and impolitic to expect the fulfilment of educational standard requirements by children so circumstanced. If for reasons of public policy all children are forced by the State to be compulsorily educated from their earliest years means should certainly be afforded by which that might be carried out least injuriously. The deterioration of the physical and mental stamina so much discussed of late had been considered to be due to the fact that a large part of the first years of life which should be primarily devoted to religious or moral as well as physical training was now given up to the development of the mental powers. Children were too early compelled to attend some school where their immature brains were forced into abnormal and disastrous activity. He believed that for the physical and mental welfare of the race such an imposition as compulsory education should be withheld from at least one-half of those who were now undergoing sentence in board schools. The present time was undoubtedly a brain age, but it was an age when brains were forced to grow at the expense of development. It was not an age of thought and reason but one of remembered facts and transmitted ideas.

ROYAL DEVON AND EXETER HOSPITAL.—Mrs. Nosworthy of Dawlish has offered to defray the whole cost (estimated at £1000) of the erection of a new operating theatre for the Royal Devon and Exeter Hospital, provided that all the subscribers who have already promised donations towards the new theatre allow them to be placed to the credit of the general funds of the hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Nov. 10th, Mr. JOHN TWEEDY, the President, being in the chair.

It was resolved that diplomas of Membership should be issued to 102 successful candidates.

A report was read from the finance committee which stated that for the quarter ending Michaelmas, 1904, the income of the College exceeded the "expenditure in respect of income" by £665; though the income had decreased by £320 the expenditure had also been reduced by £221. The report was approved.

A report was presented from the committee of management on a communication which had been received from the Board of Education in reference to a proposal for organising a system of school certificates. It was referred to a special committee to advise as to the form of answer to be sent, the Council approving of the general terms of the report mentioned.

Mr. H. T. Butlin was elected as the representative of the College in the Senate of the University of London in the vacancy occasioned by the resignation of Sir Henry G. Howse.

A letter was read from Mr. R. M. Banks thanking the Council for its resolution of condolence in reference to the death of his father, Sir William Mitchell Banks.

A letter was read from the clerk of the Privy Council transmitting, by direction of the Lord President of the Council, a copy of a letter addressed to the General Medical Council stating that the Lord President had had under consideration the proposal of the General Medical Council for the establishment of a register of medical students and the imposition of a registration fee not exceeding £1, and that his lordship had also received communications on the subject from the Presidents of the Royal Colleges of Physicians of London and Surgeons of England and suggesting that, "in the circumstances, it might be expedient for the Medical Council to confer with the Colleges with a view to the preparation of a scheme providing for their coöperation towards the desired end on a basis that would in some form or other recognise existing rights."

A letter was read from the clerk of the Privy Council transmitting, by direction of the Lord President of the Council, a copy of a note from the Portuguese Chargé d'Affaires forwarded to his lordship by the Secretary of State inviting the attendance of representatives at the Fifteenth International Medical Congress to be held at Lisbon in April, 1906.

A letter was read from the secretary of the Royal Sanitary Institute inviting the College to send delegates to a conference and exhibition on School Hygiene to be held in London in February, 1905.

A letter was read from the president and honorary secretary of the Royal Institute of Public Health inviting the College to send delegates to the next annual Congress of the institute to be held in London from July 19th to 25th, 1905.

The President and the Vice-Presidents were authorised to appoint all these delegates.

The PRESIDENT reported that he had accepted an invitation to unveil the Cadge Memorial window in Norwich Cathedral on Dec. 6th.

The PRESIDENT stated that the vacancy in the court of examiners occasioned by the expiration of Mr. Bernard Pitts's period of office would be filled up at the next ordinary meeting of the Council on Dec. 8th and that Mr. Bernard Pitts would be a candidate for re-election.

The SECRETARY reported the notices of motion for the annual meeting of Fellows and Members on Nov. 17th.

REPORT OF THE HEALTH OFFICER OF CALCUTTA FOR 1903.[1]

DURING the year 1903 it would appear that the registered birth-rate for Calcutta was 15·5 per 1000 of the population, and as Mr. Cook remarks that the true birth-rate there

[1] Report of the Health Officer of Calcutta for the year 1903. By J. N. Cook. D.P.H. Cantab., Health Officer. Calcutta: Printed at the Corporation Press. 1904. Pp. 28.

should not be less than 26 per 1000 it is evident that the registration of births is still very defective A new system of registration in one district was tried last year as an result that the numbers han in the corresponding s The death rate of the town was 35 1 per 1000 the high figure being due to a recrude cence of plague If the deaths due to the latter were subtracted the rate would be reduced to 25 4 per 1000 which is quite a moderate rate for Calcutta The cholera death rate was somewhat below nsidering that the town has has never been found to The too high death rate is pilgrims from outside and to the pollution of the tanks Reduction in the rate can only be expected when the devotees are sufficiently educated to

there has been an appreciable diminution in malarial fever in Calcutta in the last few years It is remarked that enteric fever in the native is apt to pass unrecognised and to be confused with other febrile complaints Phthisis shows an increased rate of mortality A subcommittee appointed to consider a proposal of Mr Cook to establish a home for advanced cases of the disease has reported unfavourably of the project so that for the present it is in abeyance The vaccination returns show again a falling off on the whole A new system has come into practice however with the result that in the last quarter of 1903 the number of vaccinations was 4624 against 3668 in the corresponding quarter of 1902 Vaccination was carried on by calf vaccine glycerised vaccine and lanoline paste the glycerised vaccine comparing the most favourably so that it is proposed in the future to adopt this method entirely As regards the filtered water supply samples were found always to be free from the enteric and comma bacilli Finally amongst other points noticed in the report may be mentioned the general improvements in the slaughter houses

The whole report shows a vast amount of good solid work It is illustrated by 25 tables bearing on the various subjects treated

THE INFANTS' HEALTH SOCIETY AND THE PRESENT CONDITIONS OF INFANT LIFE

THE Infants Health Society was formed as recently as last spring its object being to spread a knowledge of the best methods of combating the factors recognised as prejudicial to the life, health and development of infancy As an organised programme to such an end the society desires to maintain in infa institutions such the purpose of food adequate n infant, to cooperate with other bodies public or private either by direct affiliation or otherwise, to make grants from any surplus funds at its disposal to any bodies responsible for undertakings in consonance with the aims of the society, and generally to further the work of the society by means of pamphlets leaflets lectures and all other measures that may be deemed desirable Pending a general extension of work upon these various lines the Infants Health Society has appointed a special committee including Mr A W Mayo Robson Sir Alfred Fripp and Major General Sir Frederick Maurice with Lord Mansfield as chairman and the Hon W H Goschen as treasurer to carry on a special hospital at 7, Denning road Hampstead, under the name of the Infants Hospital Sir Lauder Brunton, Dr T M Rotch, and Dr Henry Ashby are acting as consulting physicians and Dr Ralph R Vincent is physician to the new institution We have before us the report of the first year s working giving a statement of receipts and expenditure and a medical summary by Dr Vincent of the actual work done at the hospital with the view of placing the management of infants on a basis of scientific hygiene—it being a postulate with the Infants Health Society that the public are lamentably ignorant of the right manner to succour their children and that the medical profession as a whole does not realise the urgent importance of the resulting position The report does not cover a sufficiently long time of working to make it of goes it is promising, been obtained under the authorisation of the committee of the Infants Health Society which should afford material for thought to all medical men especially to general practitioners Relying upon the facts that about one fourth of the total of deaths in the United Kingdom is contributed by infants under one year of age and that a large proportion of the infants which survive develop rickety symptoms we are asked as educated people to realise the almost complete failure of our present method of rearing the infants of the working class and the danger to our national existence which such a state of affairs clearly and definitely portends The pamphlet is strongly worded the facts are made the most of, and some not specially convincing statistics indicate the appalling pecuniary loss that is implied by the assumed deterioration of the national health Being avowedly written to arouse the public and the medical profession to the existence of evils well known to exist among us, but receiving from us no systematic attention, strong terms are used The deterioration of our national health for example, has never been proved to exist though it stares us in the face that enormous improvements might be effected in many directions The influx of an agricultural population into already overcrowded towns and the unhygienic housing of so great a proportion of our poorer citizens must affect prejudicially the national health That a spread of sound informat ntific feeding of infants widely organised scheme f nominal terms of properly food, would be a boon to the country is undoubted but we must not be drawn into thinking that even so valuable an innovation would do more than counteract some of the effects of general social conditions

The remedy that the Infants Health Society proposes for the present conditions of infant life lies in two directions (1) the encouragement of maternal nursing under proper conditions and (2) the insuring of adequate substitute food where maternal nursing is not available or impracticable With regard to the first of these the fact quoted by the pamphlet that the maternal instinct is very strong in the women of the working classes makes it certain that where physical and economic conditions permit the infant is not early weaned but unfortunately some mothers cannot nurse their infants and earn their bread simultaneously, and others with all the desire have not for this or that reason, the physical capacity In either set of circumstances the Infants Health Society desires to start an organisation for the insuring of adequate substitute food and the following are set out as the essential features of such an organisation (1) a milk depot or out patient department where the babies can be seen at regular intervals by a medical man who will order suitable food, (2) a trained nurse resident in the district with special experience in regard to infants, and (3) the cooperation of coroners so that inquests may be held upon all infants whose deaths *prima facie* might be due to improper feeding In these suggestions there is much material for thought The preparation of a suitable food is a question of one sort and the ways and means by which it should be supplied so that it should be available day by day is another The house to house visit of the trained nurse would in some cases be bitterly resented by the parents while in scores of districts we are glad to say that no purpose would be served by the new machinery as one already exists in the parish medical officer Medical men already rely upon the cooperation of the coroner in bringing to light cases where infant death has followed upon improper feeding but the situation here is rendered difficult by the fact that while some coroners welcome medical assistance others appear to spend time and ingenuity in avoiding all chances of learning the true medical history

Nothing that we have said must be taken to mean that we desire to damp the ardour of those responsible for the foundation of the Infants Health Society the management of the Infants Hospital or the dissemination of the pamphlet

1 The Present Conditions of Infant Life and their Effect on the Nation London Baillière Tindall and Cox 1904 Pp 16 Price 6d

upon the "Present Conditions of Infant Life." The movement, taken as a whole, seems to us a valuable and important one and it will give us great pleasure to see practical reforms follow upon the propaganda. The help and sympathy of medical men must be sought. The chemist, the nurse, and the coroner all have their places in the organisation of a systematic scheme of infant feeding, but the constitution of substituted foods must be regulated by the medical results of their ingestion; the opinion of a nurse or a coroner as to the part played in some domestic tragedy by ill-judged or inadequate feeding will never be regarded by the public as worth much unless it is reinforced by a medical man.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

nstances and Administration of the Urban District, by Dr. J. SPENCER LOW.[1]—The soundness of the policy of forming small urban districts is often called into question and this report is a useful contribution to the subject. In 1900 "Preesall-with-Hackinsall," an area of some 3000 acres, with a population of about 1400 persons, was separated from the Garstang rural district and was made a separate urban district, which for short may be called Preesall. This new administrative area contains some good residential houses and cottages, it abuts on Morecambe Bay, visitors go there in the summer, and volunteer camps are held there. Before 1900 a good deal of objection had been made to the insanitary conditions prevailing in this neighbourhood. It had no public water-supply, the inhabitants depending largely on rain-water or on well-water of doubtful purity; its sewers were badly laid, and the sewage in places polluted the sands of Morecambe Bay; its cowsheds were dirty and the local milk supply was open to grave suspicion. The Garstang rural council had done little for the place. The proposal to make Preesall a separate urban district was acclaimed locally as an important step to better things. We do not gather from this report whether the Local Government Board or the Lancashire county council actively encouraged the separation which the inhabitants asked for, or whether attempts were first made to compel the Garstang rural district council to do its duty to Preesall. However that may be, the official order was issued by the county council and the new district, in which a penny rate brings in only some £35, was invested with the dignity of an urban council, with clerk, medical officer of health, sanitary inspector, and surveyor of its own. On inspection in 1904 Dr. Low reports to the Local Government Board that so far the new authority has proved to be little better than the old. Schemes for water-supply and sewerage have come to nothing, while various objectionable nuisances remain unabated. "It is difficult to conceive that the conditions of the district, regarded from a sanitary standpoint, can have been appreciably worse in 1899 than they are to-day." Dr. Low deals with these insanitary conditions in detail and makes a series of recommendations on essential matters. But the prospect is not encouraging; and meanwhile, if visitors continue to go to the Preesall portion of Morecambe Bay they will be well advised to keep their children from the sewage-polluted sands on the sea front and to boil all their milk and drinking water.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8260 births and 4606 deaths were registered during the week ending Nov. 12th. The annual rate of mortality in these towns, which had been 15·9, 15·0, and 14·9 per 1000 in the three preceding weeks, increased again to 15·7 per 1000 last week. In London the death-rate was 15·2 per 1000, while it averaged 16·0 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 5·0 in Burton-on-Trent, 6·1 in Barrow-in-Furness, 8·3 in Hornsey, 8·4 in Aston Manor, 9·5 in Wallasey, 9·9 in Leyton, and 10·2 in King's Norton; the highest rates were 21·0 in Grimsby, 21·8 in St. Helens, 22·4 in Wigan, 22·7 in Middlesbrough, 23·2 in Hull, 24·2 in Halifax, and 25·7 in South Shields. The 4606 deaths in these towns last week included 380 which were referred to the principal infectious diseases, against 532, 394, and 425 in the three preceding weeks; of these 380 deaths, 127 resulted from measles, 77 from diarrhœa, 59 from diphtheria, 55 from "fever" (principally enteric), 34 from scarlet fever, 27 from whooping-cough, and one from small-pox. In Hornsey, Norwich, Devonport, Wolverhampton, Aston Manor, Coventry, and in eight other smaller towns no death from any of these infectious diseases was registered, while they caused the highest rates in Ipswich, . . Burnley, Hull, Middlesbrou.., .. . greatest proportional mortality from measles occurred in Ipswich, Plymouth, Grimsby, Liverpool, Burnley, Middlesbrough, Stockton-on-Tees, and Tynemouth; from scarlet fever in York; from diphtheria in Tottenham and Hanley; from "fever" in Grimsby, Halifax, and York; and from diarrhœa in Blackburn and Middlesbrough. The mortality from whooping-cough showed no marked excess in any of the large towns. One fatal case of small-pox was registered last week in Leeds but none in any other of the 76 towns, and only one case of small-pox remained under treatment in the Metropolitan Asylums hospitals at the end of the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, Nov. 12th, was 2843, against 2687, 2725, and 2782 on the three preceding Saturdays; 294 new cases were admitted during the week, against 389, 305, and 294 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 251, 289, and 285 in the three preceding weeks, rose again last week to 323, but were 17 below the number in the corresponding period of last year. The causes of 62, or 1·3 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leeds, Sheffield, Newcastle-on-Tyne, and in 44 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, St. Helens, Warrington, Bolton, Manchester, Preston, Huddersfield, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·5, 16·7, and 17·8 per 1000 in the three preceding weeks, declined again to 17·5 per 1000 during the week ending Nov. 12th, but was 1·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 10·8 in Perth and 12·0 in Greenock, to 17·3 in Edinburgh and 19·7 in Glasgow. The 578 deaths in these towns included 27 which were referred to diarrhœa, 20 to whooping-cough, eight to measles, three to diphtheria, and one to scarlet fever, but not any to small-pox or "fever." In all, 59 deaths resulted from these principal infectious diseases last week, against 70, 63, and 58 in the three preceding weeks. These 59 deaths were equal to an annual rate of 1·8 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 26, 30, and 21 in the three preceding weeks, rose again last week to 27, of which 18 occurred in Glasgow, four in Edinburgh, three in Dundee, and two in Paisley. The deaths from whooping-cough, which had been 16 and 17 in the two preceding weeks, further rose to 20 last week, and included 14 in Glasgow and four in Edinburgh. The fatal cases of measles, which had been six and nine in the two preceding weeks, declined again last week to eight, of which six were registered in Glasgow and two in Aberdeen. The deaths from diphtheria, which had been eight, four, and eight in the three preceding weeks, declined again to three last week. The deaths referred to diseases of the respiratory organs in these towns, which had been 95, 108, and 119 in the three preceding weeks, further rose last week to 136, and were slightly in excess of the number in the corresponding period of last year. The causes of 16, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·9, 20·6, and 21·5 per 1000 in the three preceding weeks, declined

1. London: Eyre and Spottiswoode, East Harding-street; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 2d.

again to 20·2 per 1000 during the week ending Nov. 12th. During the past four weeks the death-rate has averaged 21·8 per 1000, the rates during the same period being 15·4 in London and 16·4 in Edinburgh. The 147 deaths of persons belonging to Dublin registered during the week under notice showed a decline of nine from the number in the preceding week and included 12 which were referred to the principal infectious diseases, against 18, 16, and 13 in the three preceding weeks; of these, seven resulted from measles, four from diarrhœa, and one from scarlet fever, but not any from small-pox, diphtheria, whooping-cough, or "fever." These 12 deaths were equal to an annual rate of 1·7 per 1000, the death-rates last week from the principal infectious diseases being 0·9 in London and 1·4 in Edinburgh. The fatal cases of measles, which had been six four, and six in the three preceding weeks, further rose last week to seven. The deaths from diarrhœa, which had been 11, six, and five in the three preceding weeks, further decreased to four last week. The 147 deaths in Dublin last week included 25 of children under one year of age and 45 of persons aged 60 years and upwards; the deaths of infants showed a considerable decline from the number recorded in the preceding week, while those of elderly persons were slightly in excess. Nine inquest cases and five deaths from violence were registered and 47, or nearly a third, of the deaths occurred in public institutions. The causes of seven, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: E. R. Dimsey, D.S.O., to the *Vernon;* E. J. Biden to the *Irresistible* on commissioning; H. J. Hadden to the *President* for three months' hospital course; H. Elliott to the *Empress of India;* and J. M. Rogers to the *Lion.* Staff Surgeon E. A. Penfold to the *Britannia* for the *Highflyer.* Surgeons: R. Thompson to the *Britannia* for the *Highflyer;* M. Cameron and H. C. Whiteside to the *President* for three months' hospital course; J. H. Lightfoot to the *Albacore;* G. E. Macleod to the *Irresistible;* W. G. M. Anderson to the *Leander;* H. W. W. Townsend to the *Fire Queen* for Portsmouth Yard; R. H. Atkins to the *Wye;* H. P. Turnbull to the *Wildfire;* W. R. Harrison to the *Widgeon;* and F. C. Robinson to the *Vivid,* additional.

The following promotions have been made, viz.: Staff Surgeons: Robley Henry John Browne, Edward Butler Pickthorn, and John Falconer Hall to be Fleet Surgeons (dated Nov. 9th, 1904). Surgeons: Percival Kent Nix and William Jackson to be Staff Surgeons (dated Nov. 10th, 1904).

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned has been appointed a Surgeon, viz.:—William George Barras (dated Nov. 10th, 1904).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Majors are placed on Retired Pay (dated Nov. 16th, 1904):—A. E. C. Spence and C. J. Holmes.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cardigan: Surgeon-Lieutenant A. Thomas to be Surgeon-Captain (dated Nov. 12th, 1904). *Rifle:* The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): Surgeon-Major [illegible] (dated Nov. 12th, 1904). [illegible] attalion the South Wales [illegible] Griffiths to be Surgeon-Captain (dated Nov. 12th, 1904).

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the [illegible] *Home Dis* [illegible] Artillery ([illegible] in the Ar [illegible] 3rd (Duke [illegible] Hampshir [illegible] Edwin John Hunter. *Western District: Rifle:* 3rd V[illegible] teer Battalion the South Wales Borderers: Surgeon-[illegible] tenant-Colonel James Rolands Essex. *Eastern District: Rifle:* (3rd Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant-Colonel John Parkinson Atkinson. *North-Western District: Rifle:* 1st Volunteer Battalion the Manchester Regiment: Surgeon-Lieutenant-Colonel William Mitchell Roocroft. *Scottish District: Rifle:* 4th (Stirlingshire) Volunteer Battalion Princess Louise (Argyll and Sutherland Highlanders): Surgeon-Major Alexander Duncan Fraser.

THE NEW MILL HILL BARRACKS.

Anyone desirous of seeing the latest design and construction in the way of military barracks could not do better than pay a visit of inspection to the new barracks at Mill Hill. The Mill Hill scheme is not, we believe, a new idea but was adopted long ago by the military authorities and plans of the buildings were subsequently designed and drawn up for the purpose. The site is a large and open one and the only objection that can be urged against it is that its distance from London is likely to prevent people making themselves personally as well acquainted with the barracks as is desirable. All we can say is that, speaking generally, they are capital soldiers' barracks and a vast improvement on the old style of building. The soldiers' barrack rooms are spacious, lofty, well lighted and intended for the accommodation of not more than 12 soldiers per room. They can be used, as they should be, almost exclusively as dormitories, for dining halls are separately provided, and have excellent kitchens adjoining them. The baths are numerous and of the enamelled kind, with no stint of hot and cold water. The recreation room, which also serves for a theatre and refreshment bar, the library, reading and writing room, canteen, and the usual adjuncts to a soldiers' barracks are likewise all very good of their kind. The married quarters are excellent and nothing seems to have been neglected to secure as much privacy and domestic comfort for their occupants as is practicable. Taking it altogether we think the War Office authorities may fairly be congratulated on the result of their labours at Mill Hill.

THE WAR IN THE FAR EAST.

There is but little to be chronicled concerning the campaign in the Far East. As regards Port Arthur, it has become an almost stereotyped expression to say that the fortress, however hard pressed and distressed, still holds out, although it is slowly falling piecemeal. The sapping and mining and occasional assaults on the part of the Japanese are steadily going on and meanwhile diverting a large body of Marshal Oyama's forces from taking any part in the operations elsewhere in Manchuria. The wife of the resolute defender of the fortress (General Stoessel) has throughout the siege devoted herself to the care of the sick and wounded and has recently written to a merchant in Moscow urging him to raise funds for their relief. From this and other communications there can be no doubt as to the hardships and sufferings of the garrison. It is reported that General Stoessel, owing to his wound, has been compelled to go into hospital from which he nevertheless continues to issue his orders for the defence of Port Arthur.

As regards the military operations elsewhere there has been no movement of importance on the part of either belligerent, but it seems highly probable that heavy fighting on the Shaho will be renewed before long. The carrying capacity of the Siberian railway, which has been greatly improved of late, will be severely tried during the winter in supplying the enormous Russian force already in the field with all their needful requirements and in conveying the sick and wounded away from the hospitals in Manchuria to Russia. We have heard but little of the practical working of the Russian hospital system in this campaign, but that of the Japanese is described as excellent and independent observers have been much struck with all that they have seen of their medical science and nursing skill in the field and of the equipment and management of their hospitals. Their regimental medical provision is one of their strong points as compared with that of our own army. As regards the Baltic squadron, we may note that Madame de Nelidoff, the wife of the Russian Ambassador at Paris, has recently received a telegram from Admiral Rojestvensky from Dakar, thanking the French nation and announcing that the splendid floating hospital *Orel* had joined his squadron. An order of the day to the Manchurian army gives the number of Russian [illegible] Nelidoff and beyond from Sept. 8th to [illegible] 179 men, and the number of [illegible] The general staff at Tokio has [illegible] emanating from a Russian source, of the death of General Kuroki, which is characterised as unfounded and absurd.

A telegram from the *Times* own correspondent dated Paris, Nov. 15th, states that the collection for the Red Cross Society in the St. Petersburg churches amounted to 60,000 roubles (£6,410) and that throughout the whole Empire to 400,000 roubles (£42,735).

The Omsk correspondent of the *Novosti* sends an account to his paper of the report submitted to the Omsk Medical Society on the humane nature of the Japanese bullet. The report included the following figures. The distribution of the wounds over parts of the body were 42·03 per cent. in the lower extremities, the thighs bearing almost the half, or 20 per cent., of this total. After the thigh comes the lower part of the leg with 15·68 per cent., then the foot with 4·74 per cent., and finally the joints with 1·68 per cent. The wounds were equally distributed between the right and the left sides. The upper extremities bore 24·74 per cent. of the wounds, of which the shoulders had to bear 6·78 per cent. Respecting the thorax, the abdomen, and the head, the percentage of through and through wounds was 18·47 and generally, as already quoted from reports by medical men from the seat of war, the wounds were of such a nature as to require the surgeon's attention but very rarely. There were seven cases of bullets having passed through the brain. One was that of a sergeant-major. The bullet entered by the centre of the forehead, finding its exit at the occiput. The patient lay unconscious in one of the Kharbin hospitals for about a month. When he regained consciousness he appeared to suffer merely from depression of spirits. Another case was that of a private who had a bullet wound a little above and further forward than the right ear, and extending almost to the top of the head. He developed paralysis in the left arm and leg. The paralysis has almost left the leg but the arm is still restricted in its movements. Hope is entertained of his complete recovery. Wounds in parts of the body not enumerated above were relatively few and slight.

The Council of the Royal Society has awarded a Royal medal to Colonel David Bruce, R.A.M.C., F.R.S., for his researches in the pathology of Malta fever, nagana, and sleeping sickness, and especially for his discoveries as regards the exact causes of these diseases.

Correspondence.

"Audi alteram partem."

AMYL NITRITE v. ADRENALIN IN HÆMOPTYSIS.

To the Editors of THE LANCET.

SIRS,—Under the head of "The Medical Treatment of Deep-seated Hæmorrhage"[1] I have pointed out the rapid hæmostatic action of inhalation of amyl nitrite in phthisical and cardiac hæmoptysis. The object of this article is to compare this action of amyl nitrite with the action of adrenalin, a drug which has been widely advocated of late in the same circumstances but which operates through an essentially different mechanism. And I shall endeavour to make the comparison in the main from a physiological standpoint. The dominant spirit of modern medical science is inductive or analytical. This arose as a salutary reaction against the almost exclusively deductive or synthetic spirit which prevailed in the past. Nevertheless, it may be that the reaction—as is the way with most reactions—has in its turn proceeded too far. At least, it can do no harm—it may even prove of advantage—to review from time to time some of the conclusions of inductive science from a deductive standpoint. In any such review of pathological problems we have no option but to start from established physiological principles. In all cases of hæmorrhage there are two proximate essential factors. At the bleeding point there must be a solution of continuity of the wall of the vascular system and an intravascular blood pressure exceeding the extravascular pressure of the tissues. Neither factor alone could result in hæmorrhage. From this it follows that in order to check hæmorrhage we may (1) restore the continuity of the wall of the vascular system, as is done in surgical hæmostasis; (2) supplement by artificial means the extravascular pressure of the tissues, as is done in some forms of compression; or (3) reduce the intravascular blood pressure. None but the last of these means concerns us here, since we are considering only hæmoptysis, a hæmorrhage which is inoperable and inaccessible to general compression of the tissues.

Now the blood pressure at any given point in any given vessel may be reduced in three ways, and in three ways only: (1) by diminishing the systolic force of the heart; (2) by diminishing the general or aggregate peripheral resistance in the circulation; and (3) by increasing resistance in the bleeding vessel on the cardiac side of the bleeding point. The first indication is attained in the use of aconite which has a depressing action on the heart; the second, in the use of amyl nitrite which rapidly promotes widespread, or even general, peripheral vaso-dilation; the third, in compression exerted on the arterial trunk leading to the bleeding point, and in vaso-constriction of the bleeding vessel itself through the action of cold and of drugs such as adrenalin.

Amyl nitrite is used only for its *general* action on the circulation, which action is practically always the same. The drug promotes widespread, or general, vaso-dilation with acceleration of cardiac action. The acceleration of cardiac action depends upon the lowering of peripheral resistance and is evidently a conservative device adapted to prevent a serious fall of blood pressure. Such conservative acceleration, however, seems always less than fully adequate, for a material fall of blood pressure always does succeed the exhibition of the drug (Lauder Brunton). This fall of blood pressure commencing, as it does, at the periphery of the systemic arterial system, travels backwards in the course of the circulation through the left ventricle and left auricle into the periphery of the pulmonary arterial system. It is the fall of blood pressure in this last situation which is the proximate cause of the rapid cessation of hæmoptysis, and it was the anticipated inevitability of such fall which first prompted the use of the drug in this emergency. Unlike amyl nitrite, adrenalin is used for its local as well as for its general action on the circulation. Locally applied, adrenalin causes vaso-constriction of the arterioles of the part through its direct action on the vascular walls, and such localised action is purely salutary in hæmorrhage from the part. Given by the mouth or hypodermically adrenalin causes widespread or general vaso-constriction of the systemic arterioles with retardation of cardiac action. The retardation of cardiac action depends upon the rise of peripheral resistance and is evidently a conservative device adapted to prevent a serious rise of blood pressure. Such conservative retardation, however, seems usually less than fully adequate, for a material rise of blood pressure does commonly succeed the exhibition of the drug (Schäfer). This rise of blood pressure, commencing as it does at the periphery of the systemic arterial system, travels backwards in the course of the circulation through the left ventricle and left auricle into the periphery of the pulmonary arterial system, and a rise of blood pressure at the pulmonary periphery would of course be purely injurious in the case of hæmoptysis.

Now, there is but one way in which the injurious influence in hæmoptysis of a rise of pulmonary blood pressure so induced might be to some extent averted. The adrenalin might cause vaso-constriction of the pulmonary, in addition to vaso-constriction of the systemic, arterioles, and such pulmonary vaso-constriction might include, or preclude, the vessel immediately concerned in the bleeding. But it is more than doubtful whether adrenalin is capable of causing vaso-constriction of the pulmonary arterioles, for Dr. W. E. Dixon of Cambridge has demonstrated experimentally in the laboratory that under its use the pulmonary vessels become actually dilated. Such vaso-dilation is probably passive and dependent on the rise of general blood pressure.

The above physiological considerations and facts cast a grave doubt upon the expediency of giving adrenalin by the mouth or hypodermically in any form of hæmoptysis. And they prepare us to hear of cases in which the drug has acted harmfully. Dr. J. Gray Duncanson describes such a one.[2] In this case there seems little doubt that the exhibition of the drug was responsible for vaso-constriction of the systemic arterial system and for continuance of the hæmoptysis, for "as soon as the suprarenal treatment was abandoned the pulse became soft and bleeding ceased."

I am, Sirs, yours faithfully,

FRANCIS EVERARD HARE, M.D.,

Consulting Physician to the Brisbane Hospital; Visiting Physician to the Diamantina Hospital for Chronic Diseases, Brisbane; late Inspector-General of Hospitals for Queensland.

Nov. 6th.

[1] THE LANCET, August 20th (p. 522) and Oct. 1st (p. 942), 1904.

[2] Brit. Med. Jour., March 12th.

CANCER GENESIS

To the Editors of THE LANCET

SIRS—If I have erred in omitting to read the work on "The Principles of Cancer and Tumour Formation," referred to in your issue of Nov 12th, p 1378, by Mr W Roger Williams, how much greater must not your correspondent's sins of omission be? For while he would appear to have read only the two brief articles on cancer published by me in your pages there await his study some 40 odd other papers of mine, which, by the way, contain the results obtained in upwards of 20 years devoted to research and which profess to furnish a certain, it may be modest, amount of evidence for my conclusions I regret the sin of omission and excuse it as "only a very small one" But the book is not in the library of Edinburgh University and quite apart from books, new and old, apart from teaching and research, I find a sufficient amount of occupation in keeping in eye on the contents of some 60 scientific journals which are continually arriving from all parts of the world with results more or less new, of scientific research It may be admitted that there is at first sight a slight amount of resemblance between his conclusions and mine On closer examination it is so very slight as to preclude any possible recognition of "family likeness" Really, it is as nothing when compared with the correspondence existing between my conclusions regarding tumours, benign and malignant and those independently arrived at by Dr Arthur Styles Vallack[1] of Bowral, N S W

Though we happen to have at least one mutual friend in Sydney to my mind it is certain that Dr Vallack wrote the whole of his paper without having any idea that his conclusions had been anticipated by anyone else None the less, his views and mine correspond to a marvellous degree His results, if I may say it without offence are far more precise and to the point than those cited by your correspondent from his book, indeed, with the exception of certain things requiring a closer acquaintance with modern embryology than Dr Vallack possesses or in his position out there can have, I would willingly endorse all he then wrote regarding tumours But, Sirs, I should not care to do this for even the brief citations made by Mr Williams from his own book It is, indeed, a long time since 1888 and as it happens it was in the autumn of that year that I commenced those researches into the mode of vertebrate development which have resulted in, among other things, what is, I submit a consistent and scientific theory of the neoplasms, benign and malignant Indeed, it is the only one which can claim to be such I am not in eager quest of priority in these matters My researches are not made for purposes of personal advancement As a fact, they have never advanced me a step The conditions obtaining in Germany do not exist here Hard scientific work does not lead in the direction of recognition or advancement with anything at all approaching the certainty of these which influence and protection afford My old teacher, Professor Milnes Marshall thought differently and he used often to say to me that in science it was only research which paid What a sarcastic comment on fact! Were he now living he would be the first to admit the truth of what is written above and to agree that under prevailing conditions in Great Britain research in zoology and embryology was its own and sole reward, and that whether it expected to get anything else or not it would obtain nothing in face of any influence or protection opposed to it

A recent writer Dr Harris H Wilder,[2] in discussing various theories of double monsters, writes 'A most unique theory is that of Beard, which he develops in connexion with his original biological doctrine of multiple germ cells' But, of course, there is nothing new under the sun and the fact that identical twins or double monsters arise from a single egg was known to Professor B S Schultze happily still of the University of Jena, in 1854 Possibly, it could be traced to still earlier times and it would not be surprising to hear that Aristotle Galen, or even Solomon had formed a fair idea of the true facts[3] This goes to show that there are some things even in your correspondent's

[1] [illegible] of Neoplasms, [illegible] sters, American [illegible]

[2] [illegible] the erroneous idea of a splitting of the germ urged by Mr Williams, Dr Wilder and many embryologists and pathologists

letter, to enumerate which no research is required In the same way Professor Haeckel can claim no priority for the discovery of alternation of generations, even for that in animals. What he did only tended to make confusion worse confounded He is unquestionably a very great zoologist who has made numerous brilliant and important discoveries in this science But after a working experience of embryology of 22 years I incline to think that the advance of embryology has only been retarded by many of his doctrines, which were never founded in research He it was who did away with [illegible] ly fish aurelia—i e, the [illegible] generation discovered by [illegible] that though it is a matter of ease to demonstrate this organism, for it is such, under the microscope there is only one text book extant in which [illegible] there would be no medusa and no alternation of generations here

There is no occasion for your correspondent politely to heave Haeckel's Generelle Morphologie" at my head I know it well In fact, I was brought up upon it and on that other indigestible book, Gegenbaur's 'Comparative Anatomy" Indeed it is an open secret that like some others under this diet I should never have survived to years of scientific maturity but for the sterling substantial nourishment obtained from Huxley's classic text books Let me recall a date or two to your correspondent's recollection Alternation of generations was discovered by Chamisso in 1819 At a later period and prior to 1866 Steenstrup, Leuckart and Carl von Baer wrote upon it The "Generelle Morphologie' appeared in 1866 and it was not until 1874 that Celakovsky distinguished between two kinds of alternation of generations—homologous and antithetic These are fundamentally different but I must refer Mr Williams to my "Span of Gestation,' in the appendix of which he will find a fuller account of them I am not aware that Haeckel has ever recognised, or even suspected, the existence of any sort of alternation of generations in the vertebrata This was first done, and in the form of an antithetic one, by the writer, though Johannes Mueller and Carl Ernst von Baer stopped just short of its enunciation many years earlier In 1866 Haeckel had as little conception of the fundamental difference between antithetic and homologous alternation as your correspondent manifests to day The first passage cited by Mr Williams from his book is in my opinion, which I imagine will be shared by other practical embryologists, not a correct account of the facts of development But waiving that, the alternation therein described if it could be termed such at all, would be homologous, not antithetic The mode of development actually carried out in any vertebrate animal is demonstrably an antithetic alternation of asexual and sexual generations I have sometimes been told that this was a pre convinced idea on my part But the facts are that when the work into the mode of the development was commenced in 1888 the only "pre conceived idea" I had was that which had been taught me by Huxley, Koelliker Marshall and Semper, that the fertilised egg developed directly into 'the embryo' Only some four years later did the suspicion of an alternation of generations begin to dawn upon me and in all I have now devoted 16 years to research into the developmental phenomena of various vertebrate animals from fishes to man, in the attempt to unravel the true facts According to your correspondent I am at present the sole supporter of the view that the chorion of a mammal is the asexual generation, 'the hypothesis is in 'such an unprecedentedly rudimentary state of development' and a chorion is only found in mammals, &c Is Mr Williams quite sure that at present I am the sole supporter of this view? I know that I have convinced some earnest seekers after truth and competent practical vertebrate embryologists are so scarce in Great Britain and the colonies that it would almost be a gross exaggeration to sing "we are seven"! One of the best, a man whose services ought to be enlisted on behalf of cancer research at all costs, Dr J P Hill of the University of Sydney informed me two years ago that he considered that I had proved my thesis, that the mode of development was an antithetic alternation How does your correspondent know whether or not the "hypothesis,' as he terms it, is in a "rudimentary" state? I do not think that he has read any of the memoirs published by me since 1888

with the exception of the two short papers published in THE LANCET. Nor is there anything to show that his acquaintance with other embryological work, such as that of Hill, Hubrecht, Duval, and others, needed to elucidate various points, can be considered such as one who judges so harshly ought to possess. Of course, the chorion as such is peculiar to mammals but there is such a thing as comparative embryology, and it is not at all difficult to show that there is one mode, and one only, of development for vertebrate animals. The chorion of mammals is homologous with, for example, the blastoderm and other transient structures in a fish-development, and here, as little as elsewhere, the blastoderm never becomes converted or "metamorphosed" into the fish.

The kind of development of which your correspondent speaks is what is generally termed "direct development." For the higher animals I deny the possibility of this point-blank. It never has been established by observation in any case for the very good reason that it has no existence. In fact, even now almost all researches in development are commenced on the unproved assumption of the truth of direct development—that is, that it is the task of the fertilised egg to produce "the embryo," neither more nor less. If there be such a thing as direct development in the higher animals it should be easy for some embryologist, and again I challenge any one of them to do it, to produce a diagram of the life-cycle from egg to egg, based on actual preparations and showing its course and how germinal continuity is attained. In particular he must display the origin and history of the germ cells. He must demonstrate, what though very generally believed is impossible, that the products of the cleavage are so many embryonic bricks. With the same preparations I will then show that the whole thing is based in error or that there are important links missing in the chain. The crucial point upon which any theory of direct development utterly collapses is the source and epoch of appearance (pre-embryonic) of the germ cells. In truth, in asking the supposed embryologist to carry out the above apparently simple task, I have requested him to perform a stupendous miracle.

For the information of medical men in general and of psychologists in particular, I recently published a fairly long account of my results, with a list of original memoirs, in the *Review of Neurology and Psychiatry*.[4] Surely, it is not too much to ask that those who attack my conclusions should at least read and study this one paper? As to the distinction made by me (not by Weismann, for it is no part of his doctrines) between somatic and germ cells, that is entirely a matter for research and observation and I decline to defend the conclusions when they are attacked merely on *a priori* grounds or for reasons not based on work done by an opponent, or on presumed facts not extant in the literature of science. If your correspondent should believe that any progress worth mentioning in this weary pilgrimage after truth will, or can, be made by the slightest reliance upon Spencer's physiological units, Darwin's pangenesis, or Haeckel's perigenesis of the plastidule—all like Weismann's biophores and de Vries's pangens mere figments of the imagination—I venture to disagree with him totally. Your correspondent has a good deal to say about Weismann's doctrines. The latter believes in direct development, recapitulation, somatic origin of germ cells, and many other things, the possibility or the occurrence of which I deny. I thought that I had thrown off the last shred of "Weismannism" in the lecture which evoked your correspondent's letter. Your correspondent need not imagine that there is very much resemblance between Weismann's views and mine. In none of Weismann's publications since 1890 will a single reference to any of my work be found. In a paper cited below my friend, Dr. W. Ford Robertson,[5] has taken the trouble to analyse and to compare Weismann's views and mine. If Mr. Williams will consult that he will at once be impressed by the width of the gulf subsisting between the two sets of conclusions.

Mr. Williams started his letter by emphasising the agreement supposed by him to subsist between his conclusions as to tumours and mine. Further on he would seem to have forgotten this fact and much of his letter goes to show how egregiously wrong I have been. It was ever thus. Ever since I entered Semper's laboratory in 1882 my finds have always been wrong. In the earlier years my researches dealt with the nervous system but they invariably met with the bitter and strenuous opposition of His, Koelliker, and others who never took the trouble to examine a sufficient and suitable material. It is about ten years since I wrote my last published work upon nerve and ganglion cell and to-day my conclusions of earlier years are being advocated by Dohrn, Oscar Schultze, and others in emphatic terms beside which any words of mine pale in insignificance. Ten years ago alone I had to defend these conclusions against all embryologists. Now they are becoming generally accepted. So it will be with the neoplasms ten years hence and even sooner.[6] It does not matter whether the pathologists now accept these conclusions or not. They will one day, though I may not be alive to be witness of it. I utterly repudiate the whole legion of their supposed embryological views as to the etiology of neoplasms as a mere travesty of embryology, and so we are equal. The degree of their acceptance will always be directly proportional to that of their acquaintance with, and appreciation of, the facts of modern embryology, for, sad to say, there is no science of the pathology of the neoplasms. There is a science—and a very wonderful and momentous one it is—at present without a habitation to call its own and merely the ill-used handmaiden of many sciences. This is the science of the "Werden" and "Vergehen" of living things—comparative embryology. The doctrine of the tumours, benign and malignant, is a chapter of this science, not an integral portion of pathology.

I am, Sirs, yours faithfully,

Nov. 14th, 1904. J. BEARD.

[4] J. Beard: A [illegible] of Germ Cells as the Basis of Heredity and [illegible] Neurology and Psychiatry, vol. ii., 1904. Edinburgh: [illegible] Co.

[5] W. Ford Robertson: The Pathology of Chronic Alcoholism, British Journal of Inebriety, April, 1904.

[6] On the appearance of my first paper on cancer in THE LANCET in 1902, a very learned zoologist and comparative anatomist, Professor C. B. Howes, wrote to me: "If you are right about cancer you have solved the problem of the age."

INDIAN UNIVERSITY DEGREES AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—I beg to draw your attention to a mistake made by you in your footnote to a letter by Mr. Darû in THE LANCET of Nov. 12th regarding the qualification of L.M.S. In all the Indian universities L.M.S. is a degree granted at a convocation by the chancellors of the universities, just as the degree of M.B. is granted in England. L.M.S. as a registrable *diploma* is granted by the Medical College in Ceylon where there is no university existing. The University of Bombay grants only two medical degrees, the degree of L.M.S. and the degree of M.D. A proposal passed by the Senate to change the L.M.S. into M.B. degree has not yet received the sanction of the Government.

The Bombay Government would like to have the degree of L.M.S. made of an inferior kind and a new degree of M.B. instituted, but post medical graduates naturally resent the degree they have obtained being brought to a lower grade. The other Indian universities grant such two degrees, one L.M.S. and the other M.B., but the custom is prevalent from the time they have been granting medical degrees. I know the Royal College of Surgeons has allowed some Bombay men with the degree of L.M.S. to proceed for primary Fellowship without going for other Conjoint examinations, but why it objects now I cannot tell. I send you some proof which shall convince you that your impression about the L.M.S. qualification was incorrect.

I am, Sirs, yours faithfully,

S. B. GADGIL.

University College Hospital, London, Nov. 14th, 1904.

*** Mr. Gadgil has inclosed us his testamur from the University of Bombay which speaks of "the degree of Licentiate of Medicine and Surgery."—ED. L.

THE DENTAL HOSPITAL, BIRMINGHAM.

To the Editors of THE LANCET.

SIRS,—I see in THE LANCET of Nov. 5th a reference to the Birmingham Dental Hospital. Your correspondent conveys, I think quite unintentionally, an inaccurate impression. His

reference to a member of the general committee, who, by-the bye, is not the chairman, cannot, I feel sure, reflect the broad minded sense of the great body of the medical profession in Birmingham I believe that we have the full sympathy of our medical *confreres* in the large amount of preventive and restorative work carried out in the above institution, nor do I believe that they would desire to prevent any gentleman from devoting his leisure in helping to administer the various charities of this city because of his personal views on certain subjects You will be pleased to hear that we hope to have the new building open within six months and I trust clear of debt I am, Sirs, yours faithfully,

Birmingham, Nov 9th, 1904 FRED W RICHARDS

HUMAN RAYS AND THEIR SPECTRA

To the Editors of THE LANCET

SIRS,—I am afraid I am not one of those who have the gift of "inner perception" with which Dr J Stenson Hooker is endowed but it is interesting to learn from him that the "n" rays have a spectrum "just like a ray of white light" It is still more interesting to learn that the mental characteristics of a man are inseparably bound up with the colour of the rays he emits For example, deep red rays denote a very passionate man, pink, good and true, orange, ambitious, deep blue, a deep thinker yellow the art lover, grey, the anxious one, muddy brown low and debased, light blue, devotional, light green progressively minded, dark green, mentally ill, and so on As I am one of those who believe that man's actions are determined by heredity, though modified by his environment, have we not here a means of settling many a disputed question? Is it conceivable that the bad man could be different seeing that his rays are muddy brown? Perhaps, however they are that colour because he is low and debased It is, however, the remarkable and astounding evolution that has taken place in man's colour sense in the last 20,000 years that arrests one's attention At the beginning of that time he could only distinguish one colour (which one is not stated) and by the time of the Greeks he had added red and black, and later still yellow, and then green Poor fellows, they did not know the grass was green

As protective colouring has played a great part in the evolution of species, and as the colour sense is certainly well developed as low down in the animal scale as the crustacea if not lower, one wonders why man should have been the [illegible] as the imperfection not in [illegible] sense? Might it not just [illegible] by Grant Allen as it is to [illegible] said already, I have not [illegible] may explain my inability [illegible]

I am, Sirs, yours faithfully,

Liverpool, Nov 13th 1904 C R NIVEN

THE LONDON COUNTY COUNCIL AND VISION

To the Editors of THE LANCET

SIRS —I am one of the men referred to in the annotation under this heading in THE LANCET of Nov 5th, p 1304 The note or instruction to which you refer is private and for the information only of candidates for employment in the elementary schools of the London County Council whose vision is found to be defective The greater number of these candidates are young teachers and children who are about to leave school and be trained for the teaching profession Formerly it was customary to advise such candidates to seek the assistance of charity at hospitals but now the officer who administers this matter, wishing to inculcate a nicer and more independent principle, has arranged with the gentlemen whose names appear in that note to examine and to advise such candidates at a uniform and moderate fee I do not consider two guineas a "moderate" fee in these circumstances, nor even in the case of teachers of longer standing whose only defect is presbyopia and who are thereby induced to resort in such large numbers to seek advice at the hands of incompetent spectacle dealers or the out patient departments of our hospitals My name was not inserted in the note without my approval

I am, Sirs yours faithfully,

HARRY CRITCHLEY, M D Edin

Bentinck street, W, Nov 12th 1904

CANCER OF THE CERVIX COMPLICATING LABOUR

To the Editors of THE LANCET

SIRS,—May I correct a slight error in the report in THE LANCET of Nov 12th of my reply to remarks on my paper with the above title? What I said was that my objection to vaginal Cæsarean section was due to the risk of local *implantation* (of cancer cells) Dr G E Herman and Dr Amand Routh prefer the conservative Cæsarean section to Porro's operation with the serre nœud in inoperable cases of cancer complicating labour but they give no sufficient reason for their preference I believe Porro's operation with extraperitoneal treatment of the stump is safer than the conservative operation in these cases Sarwey gives the mortality of the conservative operation at about 60 per cent "L'Operazione Cesarea Porro" (1901) shows the mortality of the Porro operation with extraperitoneal treatment of the stump to be about 35 per cent Unless Dr Herman or Dr Amand Routh can give more recent and extensive statistics in support of their preference I ask your readers to believe that the Porro operation with extraperitoneal treatment of the stump is safer (as it is quicker and attended with less hæmorrhage) than the conservative operation May I ask anyone who has had experience of these cases to publish complete statistics with the after histories?

I am, Sirs, yours faithfully,

HERBERT R SPENCER, M D Lond.

Harley street, W Nov 12th 1904

ACTINOMYCOSIS

To the Editors of THE LANCET

SIRS —The early symptoms noted in one of the cases of actinomycosis described by Dr Robert Knox in THE LANCET of Oct 29th, p 1204, resemble very closely those which I observed in a case under my own care The patient, a woman, age [illegible] of [illegible] on [illegible] nov [illegible] wa [illegible] latterly became [illegible] She had also an enlarged liver and a gall bladder easily palpated On August 17th 1904, I was sent for and found [illegible] slight patch of pneumonia at the base of the [illegible]

was followed by a pleural effusion The sputum at this time was more abundant, very thick, viscous extremely offensive yellowish green in colour, and contained numerous yellowish granules of about the size of a pin's head I sent a sample of it to our public health laboratory and Dr J F Hodgson, the assistant medical officer of health, sent me the following report "The sputum is characteristic of actinomycosis of the lungs The granules contain the fungus of actinomycosis Filamentous forms only are present, club shaped bodies being absent The filaments stain well with Gram's method Numerous pus cells and pyogenic cocci are present" The continued hectic temperature and sweatings led me to think that the effusion was now purulent The patient, who refused any operative interference, gradually sank and died from exhaustion on Sept 6th Permission was granted for a very limited post mortem examination, which Dr Hodgson made with me The effusion was purulent and the part of the lowest lobe of the right lung in contact with the empyema was pneumonic The lungs were very emphysematous and on section were apparently normal The [illegible] displaced downwards by the [illegible] was packed with calculi and [illegible] d stone The rest of the organs as far as [illegible] apparently normal The pneumonic portion of the right lung and some of the pus from the empyema were removed for further examination I append Dr Hodgson's report "The portion of the lung removed is in a state of grey hepatisation but I am unable to demonstrate any trace of the streptothrix actinomycotica in the lung tissue or in the pus" Death was no doubt the result of the pneumonia, the actinomycotic infection being then confined to the bronchi and not having extended far into the lung tissue I am, Sirs, yours faithfully,

Halifax, Nov 12th, 1904 G McWILLIAMS HENRY

INTOLERABLE INGRATITUDE.

To the Editors of THE LANCET.

SIRS,—Has not Mr. Malcolm M. McHardy in expressing indignation at "intolerable ingratitude" forgotten that he is primarily a citizen of the State and, quite secondarily, a medical man with, it is to be hoped, a sufficient practice? Is it not usual with solicitors to call medical witnesses at the last moment by telephone or telegram and further save their time by getting their evidence taken at once? Why this was not done in his case Mr. McHardy perhaps may be able to say.

I am, Sirs, yours faithfully,

Water-lane, S.W., Nov. 10th, 1904. F. J. FIELDER.

To the Editors of THE LANCET.

SIRS,—Mr. McHardy appears to have been badly hurt. His philanthropy has been grossly prostituted. He has been indecently assaulted and there is something further about a cur which has bitten his hand!

To what do these various injuries really amount? He was deemed, rightly or wrongly, a necessary witness in an action at law and his attendance was procured by the only available method of the common subpœna. Of what can he justly complain? The fact that he is a surgeon does not place him above the law, though it certainly does give him privileges denied to ordinary individuals.

I am, Sirs, yours faithfully,

Nov. 11th, 1904. AN AMUSED SOLICITOR.

THE DELIVERY OF BREAD.

To the Editors of THE LANCET.

SIRS,—May I call attention to the insanitary treatment of bread between the bakehouse and our breakfast tables. Each morning when I walk from my rooms to my club for breakfast at 8.30 I pass a baker who is probably one of the leading bakers in London. Trays of loaves are on the pavement, often surrounded by dogs attracted by the crumbs; overladen hand carts, with dirty baskets covered with mud and bumping on the road, full of loaves, on the handles, are just starting for the morning delivery. Generally, so overladen are these carts, several loaves fall off at starting and roll about the road, only to be replaced. So disgusting is the whole thing I have insisted on every loaf being sent in brown paper by separate delivery. I think if attention was called to this by your journal, considerably more care and cleanliness might ensue.

I am, Sirs, yours faithfully,

Nov. 14th, 1904. REGINALD BARRATT.

A CASE OF EXOPHTHALMOS IN THE NEWLY BORN.

To the Editors of THE LANCET.

SIRS,—Cases of exophthalmos in the newly born must be commoner than is usually supposed; at least, I had a case some time ago. It was a natural labour case attended by a midwife. The right eye bulged out in an extraordinary way. After a few weeks the eye slowly resumed its proper position with, apparently, no evil results to vision.

I am, Sirs, yours faithfully,

I. CRAWFORD, L.R.C.P. & S. Edin.

Tredegar, Mon., Nov. 16th, 1904.

THE PRINCIPLES OF SURGERY AND THE TREATMENT OF ACUTE ABDOMINAL AFFECTIONS.

To the Editors of THE LANCET.

SIRS,—I read with the greatest interest Mr. Charles A. Ballance's remarks on appendicitis in THE LANCET of Oct. 29th, p. 1196. It is quite refreshing to find the great principles of surgery made to apply equally to an inflammation of the palm of the hand and to an inflammation of the appendix. I am convinced that Mr. Ballance is right when he argues that operation is the proper treatment for all cases of appendicitis and that the sooner it is resorted to the better is the outlook for the patient. I cannot agree with him, however, when he says that 50 per cent. of the practitioners of the country will disapprove of his conclusions. On the contrary, I believe that a very much larger proportion than he thinks will be in accord with his ideas. Any man who has been in general practice for even a few years must be able to look back on some cases of this most anxious and dangerous affection. If his experience is at all similar to mine he will be unable to recall a single instance in which he advised operation too soon, but more than one perhaps in which it was done too late.

I am, Sirs, yours faithfully,

Nov. 15th, 1904. A GENERAL PRACTITIONER.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The New Sanitary Department for India.—The Trials of the Tibet Expedition.—Medical Appointments to Kabul.—The Plague Epidemic.—The Rangoon Drainage Scheme.

As has been foreshadowed there is to be a new sanitary department for India, and Major J. T. W. Leslie, I.M.S., has been appointed as the first Imperial Sanitary Commissioner. This office will be distinct from that of the Director-General of the Indian Medical Service. The head of the new department will, of course, give his whole time to the work but his position with regard to provincial governments will be consultative rather than authoritative. An important part of his duties will consist in the organisation and direction of research throughout India, as it is contemplated to establish several fully equipped institutes in different parts of the country for the study of health problems. The central laboratory will be devoted mainly to original research of a general character and the manufacture of curative sera. The provincial laboratories will be chiefly utilised for diagnostic purposes and for special research connected with local conditions. The existing laboratory at Parel, Bombay, will continue to carry on the manufacture of the plague prophylactic. There is an enormous field of work before these institutions and upon the head of this new sanitary administration will fall the organisation of the work. For research all seems well, but for the carrying out of more practical sanitary work we are not yet vouchsafed any scheme. Probably this part is to be left to the provincial governments—at any rate the powers of the Sanitary Commissioner are not to be authoritative, as improvements will largely depend upon local resources.

When the Tibet expedition was on its way to Lhasa I gave your readers an account of some of the physical discomforts attendant upon the high altitudes. On its return further trials have had to be borne. The march over Pharo plain was in snow knee-deep and the fearful glare of the sun caused dozens of men to be stricken with snow blindness. The blind had to be led by their comrades and the sight of strong, stern soldiers following on a bit of string like blind beggars is described as having been most affecting. Progress was, of course, very slow and as the depth of snow obliterated the road the difficulties were enhanced, many men stumbling against fallen trees. The camp had to be pitched in snow and slush. The work of the rearguard was so well performed that not a man was missing. The exposure played havoc, however, and many of the followers succumbed to pneumonia.

It is reported that Major Cleveland, I.M.S., from Poona, is proceeding to Kabul as surgeon to the Amir of Afghanistan. Mrs. Cleveland and Miss Brown go as lady doctors and Dr. Gholam Nabbi is also appointed. The mission is unofficial, Major Cleveland being merely lent by the Government and the others are proceeding on their own account.

The plague epidemic has during the past few weeks been gradually recrudescing, over 16,000 deaths being reported each seven days. The Bombay Presidency reports 9801 deaths for the week ending Oct. 20th, a few hundred less than during the previous week. The United Provinces return an increase from 984 to 1248 and Central India from 1548 to 1616. Bombay city shows indications of a revival with 69 deaths, Karachi returns 13, the Madras Presidency 540, Bengal 180, the Punjab 400, the Central Provinces 661, Mysore 770, Hyderabad 494, Rajputana 473, and Kashmir 27. These figures are not hopeful, as they show how widespread are the developing centres of infection. Calcutta is quiet, only single figures being reported weekly.

The Rangoon drainage scheme proposed by Mr. Ault, of Messrs. Shone and Ault, is likely to be accepted. It will be remembered that the Shone system was partially adopted for

this city as far back as 1885, but the population has vastly increased since then and the drainage has been in a defective condition for some time past. Parts of the town are said to have a greater density than any part of London. It is suggested that an engineer should be appointed to the sole charge of the water and sewage works and also to relieve the health officer of his duties with regard to conservancy. Larger pipes are to be installed and other changes made in order to enable the ejectors to deal with the flow of sewage for some years to come. The committee has agreed to call for specifications, plans, and estimates and has approved of the re organisation of the engineering department

Oct. 27th.

TYPHOID FEVER AND THE WATER-SUPPLY AT WASHINGTON, PITTSBURG, AND ALLEGHENY.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Pittsburg, Pennsylvania, Nov 2nd

IT is not at Philadelphia only that crude sewage emanating from the numerous inhabitants of many towns and villages drains into the river above the water intake of the town supply. How this sewage-soiled water is served unfiltered to the ardent apostles of water drinking in the Quaker City has already been described [1] The endemic prevalence of typhoid fever and the high death-rate that results are a scandal, not to say a crime. Surely Philadelphia, to harmonise with the austere character of its Quaker and Pilgrim founders, should be pure in all things but more especially in the water which it by law compels the people to drink. For other but equally valid reasons the great Federal capital should also be above all reproach in such matters. Such, however, is not the case. Washington is not a town in a State, governed according to the State law by an elected municipality It stands in the Federal District of Columbia: an area of 100 square miles cut out of the territories that belonged to Maryland and Virginia. Here the central Government, the Senate, and the House of

of Columbia and the inhabitants have no vote in regard to local affairs; there is no elected municipality. So there is at Washington an example of what centralisation can do; for the national Government appoints persons whom it conceives to be competent administrators, without having to endure local pressure or to consider local prejudices. In these circumst
differences might
of administration.

population. It is true that a large sum of money is being
filtration beds, both at
but it was not to-day or
pure water supply was dis-
ome and the Moslem Moors
of Spain have left traces of their splendid aqueducts that should put to shame the Puritan water drinkers of America

the very first of all necessary elements—pure water. Some laws, I was assured, did exist to prevent the pollution of rivers but no one seemed to imagine that there was the slightest chance of their being enforced.

All British sanitary reformers have bitterly complained that our Rivers Pollution Act is not applied successfully throughout the country. But it has been applied in some instances. The number of these instances is ever increasing and, on the other hand, where the rivers are polluted the cities are careful that such water is filtered before people are allowed to drink it. When this is not done or is badly done and typhoid fever consequently occurs with more than usual frequence, the British central Government holds a special inquiry and brings pressure to bear on the local authorities The counterpart of our Local Government Board inspectors does not seem to exist in the United States, so that local authorities may continue needlessly to sacrifice the lives of those under their administration without being called to a better sense of their duty by higher and more enlightened officials For years at Washington, as at Philadelphia, the statistics have proved the abnormal prevalence of typhoid fever This has been allowed to take place in the political capital of the United States, in the very place where the national, the central, Government of all the States has full power to set an example to each individual State Here, at least, the collective wisdom of the entire nation should long ago have shown to the local administrations of the States how pure water can be procured and the prevalence of typhoid fever very materially reduced. Some good examples have been given at Washington, notably in regard to the surveillance of the milk-supply and the isolation of those who suffer from, or who have been in contact with cases of, infectious disease, but the city is much behind the age in regard to its water supply Therefore there are many deaths from typhoid fever and intestinal diseases, indeed, it was only on Feb. 4th, 1902, that an Act was passed rendering obligatory the notification of all cases of typhoid fever occurring in the District of Columbia The official report of the Commissioner governing that district states that each registered physician was at once informed and blank forms were forwarded to him so that he might comply with the law Nevertheless, it adds that "it is certain that some, probably many, cases of this disease were not reported in the period immediately following the enactment of the law" Notwithstanding, from Feb. 26th, 1902, to June 30th of that year, 200 cases of typhoid fever were reported resulting in 22 deaths. But the total number of deaths attributed to typhoid fever is 193 in 1900-01 and 206 in 1901-02 The total population was estimated in June, 1902, at 286,826 and the general death-rate at 20 73 per 1000 The average annual death-rate for ten years reckoned from 1892-93 to 1901-02 is 21·51 per 1000. This is a high death rate for so small an aggregation of population living in the city of "magnificent distances"—that is to say, where the houses are well separated from each other by noble tree-planted avenues, by gardens, and by open spaces. Also there are comparatively no poverty and no unwholesome industries In such favoured circumstances the death-rate ought to be very low During the last two or three years there has been some improvement, due doubtless to the more effective control in regard to infectious diseases and to milk-supply, as mentioned above Consequently with time and with the new water-supply, whenever that is ready, the city of Washington will be more worthy from the sanitary point of view to take rank as the capital of the United States.

Holding also very high rank by reason of its immense trade and wealth stands the city of Pittsburg. The surrounding district yields more than 58,000,000 tons of coal annually Every year more than 8,000,000 tons of iron ore are manipulated in this, the "Iron City." It is also the centre for oil fields which supply some 50,000,000 barrels of petroleum per annum and the value of its manufactures exceeds £21,000,000 per annum What the Quakers and the good families with long pedigrees who influence public opinion at Philadelphia failed to accomplish; what statesmen and centralised administration have not been able to do at Washington, this has likewise been neglected by the non kings and the oil lords in the wealth accumulating cities of Pittsburg and Allegheny There the temperance legislation of Pennsylvania is also in force, with the result that, at least on Sundays, all who are away from their own homes or who live in hotels are compelled to drink sewage more or less diluted

Pittsburg proper is situated on a tongue of land formed by the junction of the Monongahela and Allegheny rivers. Pittsburg has now 365,000 inhabitants and Greater Pittsburg the junction of the Monongahela and Allegheny rivers. about 100,000 more, while on the other side of the river Allegheny is the city which bears that name and has a population of 140,000 Between the two rivers some 250,000 persons are supplied by the city waterworks which were commenced in 1870 and finished in 1890. These are pumping works The water is taken above and beyond the town but not very far away The river Allegheny has a course of about 260 miles above the intake. On either side there are ledges formed in the rocky bed of the river and here are built towns, villages, and numerous works or factories which all drain directly into the river. Altogether

[1] THE LANCET, Nov. 5th, 1904, p. 1315.

the sewage from 500,000 to 600,000 persons drains directly into the Pittsburg water-supply. No attempt whatsoever is made to treat or to purify such sewage.

A private company takes some water from the Monongahela river about a mile above the town and supplies it to those who live on the south side of this river and there is also a little water taken further down from the Ohio which is here formed by the junction of the two rivers. But these rivers are all contaminated with sewage. They also contain free sulphuric acid. This corrodes boilers very quickly. The peculiarly acid reaction is due to the presence of a large quantity of minerals, notably pyrites-bearing coal. This acidity, however, would appear to have no action upon the bacteria which flourish to an alarming extent. Both rivers are fair rivals in this respect. The result is that typhoid fever prevails in an endemic manner throughout the district. During the ten years ending 1900 the average number of deaths from typhoid fever is stated by the municipal authority to have been 24·9 in January, 25·5 in February, 20·4 in March, 18·2 in April, 16·6 in May, 13·3 in June, 17·3 in July, 28·2 in August, 28·3 in September, 27·7 in October, 19·8 in November, and 22·5 in December. In that period of time the minimum number of deaths from typhoid fever per annum is set down at 61·9 per 100,000 of the population, the maximum at 144·3, and the average at 90·11. The endemic character of the disease is thus very clearly demonstrated though there is an accentuation in the autumn. Indeed, the population is now so inured to the fever that an increase of cases generally accompanies any special accentuation of prosperity. This means that many strangers come from other parts of the country to share in the good times, and as they are not accustomed to the poisonous water-supply they fall ready victims. As one of the sanitary officials remarked, if the inhabitants of Pittsburg had volunteered for service during the late Boer war they would not have suffered like the British troops from typhoid fever. At the same time I was informed that there was no sewage disposal scheme in existence in any way likely to prevent the contamination of the water-supply. There is a project for the erection of a sand filtration plant but before this can be carried out several legal difficulties have to be overcome. Then it will take at least two years to build the filters. In the meanwhile the death-rate is increasing. The annual average for the ten years ending 1900 was 19·30 per 1000. In 1903 the death-rate was equal to 21·1 per 1000.

Nor are matters any better on the other side of the river in Allegheny city. Up to the year 1898 the water intake was close to the town and below the Pittsburg intake. A terrible sewer, known as "butcher's run sewer" because it received the offal from many slaughter-houses, then emptied into the river above the Allegheny water intake. When the annual clearing of the reservoirs was made dead cats, dogs, and chickens, large pieces of flesh, and other organic matter in decomposition were pumped out. Typhoid fever was so prevalent that the authorities determined to lay a water main going eight miles up the river and here is situated the present intake. Instead of being below it is now two miles above the Pittsburg intake. It is also beyond the drain coming from the hospital and the asylum for the aged. But this drain is still above the Pittsburg intake. The municipal statistics show that during the year ending March, 1903, 149 deaths were attributed to typhoid fever at Allegheny and during the year ending March, 1904, there were 146 deaths from this cause. The general death-rate is increasing here as at Pittsburg, the figures being 16·98 per 1000 for the year ending March, 1901, 18·65 for the following 12 months, and 19·65 and 18 46 for the two succeeding 12 months. Yet the town continues to supply the unfiltered water of the Allegheny river. This is all that two of the richest communities in the world are able to do. The inhabitants of Pittsburg and Allegheny, while building up gigantic fortunes, are incapable of building a filtration plant such as exists in hundreds of other places where there is nothing like the wealth that the "Iron City" possesses. What is the good of such fortunes when it is dangerous to drink a glass of water? Where is that sentiment of *noblesse oblige* which should apply to the plutocracy as well as to the aristocracy?

DONATIONS AND BEQUESTS.—Under the will of the late Mr. Hammond Chubb the Zenana Bible and Medical Mission receives £200.—The Hull Royal Infirmary will receive £200 under the will of Mr. D. Haughton, late chairman of that institution.

PROFESSOR BACCELLI ON THE MOSQUITO THEORY OF MALARIA.

(FROM ONE OF OUR ITALIAN CORRESPONDENTS.)

THE Fourteenth Annual Congress of Internal Medicine took place in Rome on Oct. 24th to 26th under the presidency of Professor Baccelli who, having retired from the political arena a year ago, has returned to the field of his former labours at Santo Spirito full of his old energy and enthusiasm. His inaugural address to the Congress took the form of a vigorous protest against the modern doctrines regarding the etiology of malaria, about which, indeed, he has always maintained a conservative and critical, if not absolutely sceptical, attitude. In the fervour aroused by the new discoveries the leaders of the modern school—pathologists of the laboratory, as he calls them—have rushed to what he believes to be the erroneous conclusion that malaria in the sense in which it had hitherto been understood does not exist, that there exist only infected persons and infected anopheletes, and that the parasites of malaria are conveyed backwards and forwards between these two exclusively. Thus they would destroy at a stroke the conception of malaria which has been handed down to us for generations and which was founded on the observations of physicians of the highest attainments who dedicated their lifetime to the study of the subject. He contends that however satisfactorily the mosquito theory may serve to explain some phenomena of the epidemiology of malaria it fails to throw any light upon certain severe outbreaks connected with ricefields and marshes situated at long distances from the haunts of anopheletes which it is known do not travel far. Why, he asks, should it be a rule of prophylaxis to keep indoors after sunset in spite of the fact that the anopheles lives by preference inside dwelling-houses? How account for cases of malaria on board ship, for the diminution of malaria in towns after their water-supply has been improved, or for the fact that malaria may be contracted in deserts and uninhabited places by those explorers who are the first human beings to set foot upon them? Further, whilst the susceptibility to "spontaneous" malaria is almost universal, the same cannot be said of that inoculated by the infected anopheletes. If these insects are the only carriers of malaria how comes it that but a small percentage become infected by sucking malarial blood and become capable in their turn of infecting healthy persons, whilst infection results in 100 per cent. of cases where malarial blood has been injected by means of a needle into such persons? There are likewise, he considers, epidemiological facts of importance that weigh against the mosquito theory as being of universal application, such as the association, observed by Professor Baccelli himself, of malarious individuals with anopheletes in great numbers in the marshes of Fucecchio without any fresh outbreak of autochthonous malaria occurring, although in former times the disease was prevalent and deadly in that same locality. The distribution of the anopheles, too, is not parallel to that of malaria either geographically or in time. Thus, in July and August, whilst the epidemic is at its height, mosquitoes are few and only increase in numbers when the malarial season is drawing to a close, and, what is stranger still, that season sometimes begins by a sudden outbreak of numerous simultaneous cases whilst there is scarcely an infected mosquito to be found in the locality and few or no malarious persons happen to be living there. It has been objected that these are all cases of relapse, but the objection is not a valid one to Professor Baccelli's mind because not only is there wanting any relation in numbers but also any correspondence between the different types of fever. As a matter of fact, whilst nearly all the relapsing cases in winter and spring are of the æstivo-autumnal and quartan type, the new malarial season beginning at the end of June is represented almost exclusively by tertian cases, and—if a difference in the variety of parasite in the three types is admitted—the question arises, Where has the tertian parasite hibernated? Other difficulties in the way of the mosquito theory in Professor Baccelli's view are the length of the period required for the development of the attack after mosquito bite (about ten days) as compared with the shortness of the interval (often only three or four days) required for the newcomer in a malarial district to contract malaria; the sudden outbreak of numerous cases, almost all primary, immediately after a downpour of

rain, and many other facts which, however, he does not specify He has therefore no faith in prophylaxis by mechanical protection from mosquito bite, believing as he does that malaria can be and usually is, contracted in some other way He refuses to accept the dictum of the anopheles exclusives who believe that the life of the parasite depends upon its introduction by the mosquito into the blood of man and that the double life cycle is necessary to the perpetuation of its existence, and he seeks to justify his scepticism by recalling the fact that the parasite can undoubtedly reproduce itself asexually and indefinitely in man, and by quoting Laveran, Ross, and Manson the first of whom thinks that the parasite may go through its development in the anopheles alone, while the latter affirm that by means of the so called black spores it is capable of continuing to exist in the outside world independently of living organisms Ross besides speaks of having seen cases of malaria arise in persons who had drunk water containing mosquitoes and their larvæ Although these views of Professor Baccelli seem somewhat out of date the scepticism of the veteran champion of the ancient theories may serve a good purpose by directing more attention to some of the lacunæ which undoubtedly still remain in our knowledge of the origin of malaria It is true that few or none of the modern observers take up the position ascribed to them by him of denying the existence of any mode of infection other than by mosquito bite, but it is nevertheless felt by everyone conversant with the subject that this aspect of it requires more study and that there is some problem behind, the solution of which might throw a flood of light upon the etiology and prophylaxis of malaria At next year s Congress of Internal Medicine this theme of the etiology of malaria is to form the first subject of discussion and will be introduced by Professor Baccelli himself

THE INTERNATIONAL CONGRESS ON DERMATOLOGY.

(FROM A CORRESPONDENT)

THE International Congress on Dermatology was opened at Berlin on Sept 12th Professor LESSER (Berlin), who was in the chair, delivered an address in which he said that dermatological science had developed rather late in Germany—much later, in fact, than in France and Austria Simon and Baerensprung excepted, there were no leading dermatologists in Germany previously to 1870, but since that time the subject had received much attention and German dermatologists were now not less accomplished than were those of any other country

Dr HOLT, an Under Secretary of State welcomed the Congress in the name of the Imperial Government and alluding to the subjects of syphilis and leprosy which were to be discussed by the Congress, said that these questions were of national importance

Dr KIRCHNER spoke on behalf of the Prussian Medical Department, Herr KIRSCHNER, the mayor of Berlin, on behalf of the city Professor SCHWARZ, the rector for the University, Professor von BERGMANN for the Berlin Medical Faculty, and Professor GAUCHER (Paris) for the foreign delegates

Treatment of Epithelioma

Dr SCHLESINGER (Berlin) assistant to Professor von Bergmann, said that the only efficient treatment of epithelioma was by operation Undoubtedly there were cancroids which might be successfully treated by means of radium and by means of light as used by
were only very superficial cases
apparently cured cases there was
whilst the cancerous process spread to the deeper layers of the tissue Surgical treatment might even then be successful although the most favourable time for operation had passed but in many cases the operation came too late In the Berlin Surgical Clinic three such cases had been observed during the last few weeks Superficial epithelioma might become cicatrised under radiotherapy, but this was of little importance as a similar result might be obtained by cauterisation Radiotherapy had not in any case been found superior to surgical treatment A striking experiment illustrating this had been performed by Professor Perthes who exposed the ears of a rabbit to the radium rays and found that the nearest layers showed extensive ulceration which decreased in proportion to the distance from the radium salt The recommendation of phototherapy was based on the supposition that the results of surgical operations were bad, but statistics proved the contrary Of 171 patients operated on for epithelioma 106 were cured and alive at least three years after the operation, 16 died after three years, 25 died within three years after the operation, three were still alive but had relapsed The results though quite favourable would certainly become better when the operations were performed at an earlier date In cases which were already unfit for operation phototherapy might be useful to relieve the pains of the patients and to produce a superficial cicatrisation of the gangrenous ulcerations, in every other instance, however operation was the sovereign remedy

Professor LESSER wished to distinguish the superficial cutaneous cancers from the deeper ones The former variety (rodent ulcer) was suitable for phototherapy, while the latter must be operated on

Dr VON PETERSEN recommended injections of a soda solution of 15 per cent strength

Prevention of Leprosy

Professor NISSER (Breslau) said that he still held the views which he had expressed at the Congress on Leprosy held in 1897—namely, that the disease was contagious and was spread exclusively by lepers The variations in the frequency of leprosy in different countries depended on variations in the possibilities of contagion Leprosy being incurable, it was necessary to reduce the opportunities of contagion as much as possible by isolating all the sufferers in special homes This system, though theoretically right, might nevertheless be modified in some respects It was sufficient to isolate only lepers having open ulcerations because they alone discharged the virus Other patients might be kept at home but must from time to time undergo sanitary inspection Leper asylums must not present the appearance of a penitentiary, whilst on the other hand, the isolation must be tolerably strict In certain countries the inmates were so badly fed and so ill provided for that they had to support themselves by begging and in that way became a danger to the district This, of course, ought not to be allowed Notification of leprosy ought to be compulsory in every civilised State and trustworthy statistics ought to be published It was difficult to decide whether leprosy had decreased since 1897 In the only part of Germany where leprosy existed the Memel circuit, the number of patients had decreased from 25 to ten and of late years no recent case had been notified In Norway also isolation had proved successful Of course, lepers could not be prevented from marrying but the sanitary authorities ought to have power to isolate the children from the
e allowed to enter other
the spread of the disease
ought to be

Phototherapy

Dr FORCHHAMMER said that the practical methods of phototherapy had not been improved during the last few years The application of ultra violet rays by the so called
especially
the warty forms of tuberculosis of the skin were suitable for the treatment In lupus erythematodes, acne vulgaris, acne rosacea and alopecia areata the Finsen treatment should be combined with other methods As to epithelioma, only the superficial forms (cancroids and rodent ulcer) should be treated by the Finsen light

In the discussion Dr SCHIFF pointed out that the combined treatment promoted the cure of lupus The Finsen light was indicated in the diffuse ulcerative form and the Roentgen rays were indicated in the circumscribed nodular forms of lupus and in lupus of mucous membranes In other affections of the skin the results of phototherapy were uncertain as in alopecia areata which might sometimes get well spontaneously

Professor LESSER said that the Finsen method was the most important improvement in the treatment of lupus and was not equalled by any other procedure The long duration of the treatment was of no consequence in a disease of so chronic a nature

Dr SCHOLTZ (Konigsberg) described the action of the radium rays and said that it was very like that of the x rays.

but differed in some points. The radium rays acted more directly on the blood-vessels and on the deeper layers of the tissues and, moreover, had a rather strong bactericidal influence. As to their therapeutic effect, he had found that the radium rays acted more vigorously on malignant growths of the skin, especially on cancers; they had a curative action in telangiectasis and small angiomata, and, finally, might be applied to regions of the body which were inaccessible to the Roentgen rays, especially to the great cavities—the pleural, peritoneal, and cerebral.

Skin Disease and Metabolism.

Professor VON NOORDEN (Frankfort) discussed the matter from a theoretical standpoint, alluding especially to the theory of auto-intoxication.

Professor JADASSOHN (Berne) said that dermatoses indicated the existence of anomalies of metabolism, being influenced but not caused by these anomalies. Probably certain substances which were present in the circulation were the causes of the dermatoses. These toxins might either act directly on the skin, as in icterus and in pruritus, or they might produce vaso-motor troubles, as in urticaria, or act indirectly, as in diabetic xanthoma. Dermatoses might be produced when the toxin of the circulation appeared in the secretory system of the skin. In other cases the liability to contract a disease of the skin was perhaps augmented by the anomaly of metabolism as bacteria which were present in the skin showed an increased growth. As to the individual disturbances of metabolism, Professor Jadassohn said that in gout there were no specific skin diseases, tophi excepted. Diabetic xanthoma only occurred in real diabetes, as in cases alleged to be pentosuria the diabetes was obviously in a latent state; in a case of prurigo ferox an affection of the pancreas could be ascertained by examination of the bowels.

(To be continued.)

SECOND LATIN-AMERICAN MEDICAL CONGRESS.

(FROM OUR OWN CORRESPONDENT.)

THE report of this Congress, which was held at Buenos Ayres in April, 1904, has just been published. Among other papers of special interest are the following:—Dr. MAXIMILIAN ABERASTURY of Buenos Ayres, on Idiopathic Multiple Sarcomata. The author's conclusions are the following: 1. The primitive sarcomata of the skin must be actually of relative frequency in the Argentine, as in less than five years a single observer had been able to see all the described clinical types with the exception of one (type Piffard). Unna described five irregular types—namely, Unna, Piffard, Neumann, Perrin, and Funk Hyde. 2. With the exception of the type Kaposi Dr. Aberastury had proved that in all the other forms of sarcomatosis the morbid process seemed to begin in a circumscribed spot which served as a centre for the ultimate multiplication of the cutaneous nodules or might be regarded as a door of entrance for an infection. 3. In spite of careful research in no case had Dr. Aberastury found microbic or parasitic forms in the non-ulcerated nodules, or in the blood itself which had only presented conditions of anæmia of variable intensity. 4. The clinical differences of the types Neumann, Perrin, and Funk Hyde were in evident relation with their differences in histological structure, but variable grades of malignancy could not be based on it. In the three cases alluded to the morbid process had shown itself to be as inexorably progressive and fatal as in melanotic sarcoma, the most infectious of all. 5. Finally, in presence of these grave and generalised morbid processes, up to the present efficacious therapeutic measures could not be counted on. If arsenical treatment could temporarily influence Kaposi's sarcomatosis, on the other hand, it had no appreciable action on the other forms.

Professor LIGNIÈRES (Buenos Ayres) read a paper on Human and Bovine Tuberculosis in which he said that the true tuberculoses found in man and the domestic animals were due to bacilli which all belonged to the same group, the same species as the Koch bacillus which, however, came under the general law of variation of type. So that besides possible varieties still undetermined they knew now the following different types (*a*) bovine tuberculous bacillus, which was only a variety of the human type and *vice versâ*; and (*b*) avine and piscine bacilli which were of distinct races respectively and which differed from the human and bovine bacilli. Now that they knew, however exceptional it might be, that the bovine tuberculous bacillus could infect man especially in infancy, it would be a grave mistake to abandon the campaign so wisely initiated against the bovine tuberculosis. On the contrary, it was necessary to follow it up, to extend it, and to complete it, against the other animal tuberculoses, not only to prevent a possible contagion to man, but to combat particularly bovine tuberculosis which tended to increase alarmingly amongst cattle.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Dangers of the X Rays.

AN interview with a local medical man, in which the matter of lesions of the skin as a result of the x rays was alluded to, having appeared in the columns of the local daily press, a reporter called upon Sir Oliver Lodge and inquired his opinion upon the point. Sir Oliver Lodge said: "It has long been known that x rays might produce, or were apt to produce, sores, and it has also long been known that some sores are apt to develop into what is popularly called cancer. But there are many varieties of cancer and it is not strictly the medical term, so that it is difficult to say anything about it. My own idea is that it is not the x rays themselves which are responsible for this result but something which accompanies them and which can be screened off by suitable appliances, whereas no screen will completely obstruct the x rays. Hence it is likely that effective precautions can be taken by operators whose long continued exposure to the x rays must be regarded as specially dangerous. The danger does not affect the patients to the same degree, though I believe some unfortunate results in the past have been produced upon patients also. Certain experimental results have suggested that cells can be stimulated into abnormal activity by the x rays themselves and if this theory is well founded then there may be some danger arising from this cause. At present it appears most likely, however, that x-rays dermatitis is the adventitious result of some concomitant which can be avoided by suitable precautions. It would be injudicious for the public to jump at the conclusion that the sores are of the nature of cancer, or have anything to do with it, although they may simulate its appearance and in certain cases may stimulate some previously existing cancerous tendency. On the whole it is probable that the sores are more akin to burns, in the infliction of which preliminary symptoms are able to afford no warning. It should be clearly understood that they only come after prolonged exposure."

The Bishop of Worcester and Faith Healing.

At the last annual service of the local Guild of St. Luke the sermon was preached by Dr. Gore, Bishop of Worcester, whose striking personality has made so much impression on the great city which is so shortly to cease to be a portion of that diocese. After alluding to the fact that at one time the clergy, being the only learned men, controlled politics and medicine as well as the religious exercises of the public, and that increasing knowledge and specialisation had altered all this, Dr. Gore went on to plead that the health of the body depended on the recognition of specialism. It was to be recognised, he said, that those who were outside the special departments of knowledge were obliged to accept the knowledge in which they themselves could not participate on the authority of those who knew. If the physician who knew were to tell him who did not know what he observed, what he suspected, and what he thought, it would convey to him either no information at all or else a false information. It would alarm him, because he would misinterpret it, for, as a matter of fact, the exact state of things as perceived by a scientific man was only intelligible to one who had that context of general knowledge which the terms and phraseology involved. Each in his department should recognise the place of others in that which went to make up the various and manifold well-being of human society. And in the matter of healing he wished to make an appeal to those who, as physicians and as nurses, were occupied about

the bedside of those seriously sick and dying, to allow its proper place to the ministry of religion which had, he fancied in recent years been almost crowded out from any real or intelligible part in ministering by the bedside of the dying The ministry of religion was not summoned, at any rate very often was not allowed to appear, at the bedside of the dying until, for all intelligent and intelligible purposes, it was too late, because the patient was no longer capable of entertaining serious thoughts He earnestly asked those who shared the responsibility in the control of sick rooms to endeavour to procure some reform in this matter There had been a great tendency to deal with sickness in its final and serious stages as if a man were merely a body without a spirit and Christian society had been wandering to extravagances for so they often were, in the way of faith healing is a reaction and protest against an undue separation of what was legitimate and right He believed with the most profound conviction that faith with its quiet, calming power—the consciousness of peace with God, the expectation of Divine help, the faith in the power of prayer,—he believed that these things had an effect far greater than merely material science had been accustomed to recognise in producing or maintaining a healthy body or physical life He believed that faith healing had at the bottom of it a real and legitimate witness against the one sided materialism with which we had been treating sickness, and so he earnestly asked of those who were responsible for the control of the sick bed to see to it that while the physician was allowed his own proper supremacy of direction the minister of religion was allowed his own proper place in the ministry of prayer, and the sacraments, and the word of God

Birmingham Medical Mission

The annual meeting of this organisation has recently been held, Dr Thomas Savage being in the chair Mr H Bagster Wilson the medical superintendent, gave an account of the work done and stated that the mission was founded in 1875 and was beginning its thirtieth year of work It had progressed from a room in Park street to the present buildings which were opened by Alderman Lloyd in May, 1902 They would not claim that there had been no shortcomings and failures, but countless lives had been helped spiritually, morally, and physically by this simple unpretentious agency and much sheer hard work for the city inhabitants had been accomplished by a little army of worker men and women rich and poor The fears expressed before the experiment of 1875 was undertaken had happily proved groundless the mission had proved needful and its essential principle of a combination of medical and Christian influence did not need change After extending his thanks to his medical colleagues Mr Wilson stated that the ambulance class was an entirely fresh effort in keeping with the objects of the mission A

a practical interest in the women s girls', and other departments and had presented an organ The great value of settlements in the poorer and more crowded districts was increasingly recognised and the medical mission embodied many of the highest features of settlement life Some of the workmen resided on the premises, others close by while others again, treated the mission surroundings as their home The mission was fitted, by the practical experience of its workers to play no little part in throwing light on how to deal with the poor individually and in relation to their environment

Disposal of Sewage

Mr John Price, the city surveyor in a paper recently read to the Scientific Society of the Birmingham and Midland Institute dwelt upon the importance to the community of a good system of sewerage Since great attention had been paid to the provision of a pure water supply and an effective method for the removal and the rendering innocuous of liquid refuse there had been a steady drop in the death rate The disposal of sewage depended of course, to a large extent upon the situation of the town from which it was desired to remove it There were three principal systems of town sewerage at present—namely, the combined, the separate and the partially separate systems He advocated the use of the partially separate system such as had been laid down in Edgbaston and Harborne as being the most effective and economical inasmuch as in time of an exceptionally heavy rainfall less liquid found its way to the outfall, a large proportion of the surface water being diverted from the sewer proper into other channels The greater part of the sewerage system in Birmingham at the present time was on the combined system the disadvantage of which was that the sewer had to be constructed out of all proportion to what was required of it in dry weather

Nov 12th

LIVERPOOL

(FROM OUR OWN CORRESPONDENT)

University of Liverpool Inauguration of the New Buildings of the Medical School and the George Holt Physics Laboratory

THE new buildings of the Medical School and the George Holt Physics Laboratory were opened on Nov 12th the former by the Chancellor of the University (the Earl of Derby K G) and the latter by Lord Kelvin Prior to these ceremonies a large gathering assembled in St George s Hall under the presidency of the Chancellor who explained that the University extensions since 1898 had involved an expenditure of close on £100,000 Lord Kelvin said he found realised in the new physics laboratory general developments of 50 years of physics laboratories in this country and the world The Right Hon R B Haldane M P (who had taken a leading part in the establishment of the University) was admitted to the honorary degree of Doctor of Laws and in a subsequent address declared that the new universities had their own work to do in the formation of character and in influencing the training of teachers in their vicinity The new medical school in keeping with the rest of the University buildings is of brick, with terra cotta decorations and stone dressings It completes the range of buildings on the science side of the quadrangle and is one of the best equipped institutions of its kind, a special feature all through the school being the provision made for individual research The style is Gothic and the plans and designs were prepared by Mr Waterhouse R A The main entrance is to the right under an archway leading from the main quadrangle to a smaller one on the south and east sides of which are the new buildings and on the west side is the old medical school now used for materia medica and preparatory work A moderate sized entrance hall opening from which are a porter s lodge, photographic dark room and laboratories, gives access to the main staircase On the ground floor also with access from the hall are the rooms of the dean of the medical faculty, the professors common room

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the building and lighted by sk

to accommodate a large number of students and with every convenience in the matter of apparatus and lighting There are two entrances one from the hall and the other from the gallery of the anatomical museum The last is one of the features of the institution, being 59 feet by 40 feet two storeys in height and lighted on two sides Another entrance to the museum is provided from the smaller quadrangle On a mezzanine floor are several rooms for research and the museum of embryology. The first floor is devoted to the department of anatomy The laboratory and study of the professor of anatomy a preparation room and ample lavatory and locker accommodation for students occupy one wing of the building The anatomical theatre similar in size and plan to the surgical theatre below, is situated between these apartments and the dissecting room, equal in size to the

storey of the museum wing

from the roof and is overlooked by

gallery for special research An operating room for advanced students in surgery a bone room, and a class room for women students are arranged on the second and top floors In the basement, which is light and lofty owing to the fall of the land, are the departments of toxicology, ophthalmology practical surgery, and advanced medicine The George Holt physics laboratory, erected through the munificence of Mrs Holt Miss Holt Sir John Brunner Bart M P, the late Sir Henry Tate, Bart, the executors of the late Rev J H Thorn Mr Alfred Booth, Mr Holbrook Gaskell Mr J W Hughes, and Mr John Rankin, and to which these donors contributed nearly £26 000 was described by Lord Kelvin as "a place of delight for every scientific man every scientific boy, and

every scientific girl." The laboratory covers an area of 9600 square feet and has an average height of 55 feet. The external walls are built in best common brick, with broad courses of red brick and dressings of Storeton stone. The basement floors are asphalt on a bed of concrete, resting on the continuous rock which is the foundation of the whole building. All the upper floors are fireproof; they consist of a bed of concrete which encases a lattice-work of steel girders and supports, a layer of coke breeze, upon which tongued and grooved pitchpine boards are fastened with bitumen and nailed. The resulting surface is both noiseless and steady and the whole building is made rigid by the girders employed. In the basement there are a large workshop fully fitted with machine tools, storerooms, a room containing a liquid air plant, a furnace room, an accumulator room, a room for the custody and comparison of standards, and a number of research rooms in which extra steadiness, or complete darkness, or constancy of temperature can be respectively secured. On the ground floor, close to the entrance hall and cloakrooms, are the doors of the large lecture theatre, a smaller class room, and a large laboratory for elementary students. This floor also contains the preparation room, the apparatus room, and a sitting room, office, and private laboratory for the professor. The first floor is set apart for the teaching of senior students. It contains two large students' laboratories, four smaller rooms for optical and acoustic experiments, a students' workshop, a library, and two sitting rooms for demonstrators. The second floor consists almost entirely of research rooms of various sizes. Of these, some are designed for special purposes, such as spectroscopy, but the majority are planned so as to be adaptable to as great a variety of needs as possible. A photographic dark room is provided on each floor; that in connexion with the preparation room is adapted for the making of lantern slides and enlargements. There is also a small observatory on the roof containing a four-inch equatorial telescope. An electrically driven litt, working in the centre of a tower, is available for the conveyance of heavy apparatus from floor to floor. It can also be used to give access for experimental purposes to all points of two vertical walls which extend to the full height of the tower, about 75 feet. In another part of the laboratory, access over a horizontal distance, about 90 feet, nearly equal to the whole length of the building, is secured. The rooms are heated by low-pressure hot-water and ventilated by an exhaust fan in the roof. They are adequately supplied with gas, with sinks to which hot and cold water are led, with electric power from the corporation mains, and with wires from a switchboard in the basement, to which accumulators are connected. The wiring is run in wood casings on the surface of the walls, all pipes are fully exposed, and wherever a floor or wall is pierced an opening is left through which permanent or temporary connexions can be made as required. The architects are Messrs. Willink and Thicknesse of Liverpool and Professor F. M. Simpson of University College, London, formerly of University College, Liverpool. Amongst the guests invited to the ceremonies were the President of the Royal College of Surgeons of England (Mr. J. Tweedy), Sir Dyce Duckworth, Dr. Frederick T. Roberts, Sir William Macewen, Professor Howard Marsh, Professor J. Cleland, Sir Oliver Lodge, Viscount Cross, G.C.B., the Lord Bishop of Liverpool, and the Vice-Chancellors of the Universities of Leeds, Wales, and Manchester.

Liverpool University Association Dinner.

The Earl of Derby (the Chancellor) presided over a large gathering at a dinner given in connexion with the University Association on Nov. 12th at the Adelphi Hotel. Among the guests were the Right Hon. R. B. Haldane, M.P., LL.D., the President of the Royal College of Surgeons (Mr. Tweedy), Sir Oliver Lodge, and others. Professor A. M. Paterson (professor of anatomy) responded to the toast of "The New Buildings." He said that it was ten years since the building scheme was commenced. The endowments made after the foundation of University College had rendered the scheme possible. Mr. Thompson Yates started it with the erection of the laboratories called after his name. Then appeared as a builder Mr. George Holt, who began on either side of the block and founded different buildings for the department of anatomy which were much needed. The opening of the Thompson Yates laboratory resulted in an appeal being made, as a result of which £1400 were raised, and they were enabled to build the museum of anatomy and a dissecting room block. Then came a wave of enthusiasm and the sum of £20,000 was allotted for the completion of the block. They had now a complete building surrounding the great yard where the one relic of the past was the little old square block founded in 1834 by the trustees of the Royal Infirmary. The series of buildings for medical instruction and medical research which they had completed that day had cost, roughly speaking, £80,000. Professor Wilberforce (professor of physics) also acknowledged the toast and expressed the debt of gratitude which the school of physics owed first of all to the memory of Mr. George Holt, and next to the donors for the resources from which the latest magnificent addition to their fabric had sprung. Sir Oliver Lodge, in replying to the toast of "The Guests," said that in Birmingham they looked with envy at Liverpool in splitting up the gigantic subject of chemistry by the endowment of a chair of that most important branch, physical chemistry. Unfortunately, they had not a Sir John Brunner to give £25,000 and to allocate £10,000 of that amount for a chair of physical chemistry.

Liverpool Royal Infirmary: the John Lawrence Memorial Bed: Interesting Ceremony.

The Lord Mayor and Lady Mayoress visited the Royal Infirmary on Nov. 3rd for the purpose of affixing the memorial plate over the bed which has been endowed in memory of the late Alderman Lawrence, who died at sea in April last while returning from a trip to the Mediterranean. Mr. Lawrence was for 23 years connected with the Royal Infirmary as a member of the committee and at the suggestion of those with whom he had worked so long a public subscription was opened to provide a suitable memorial. A meeting was held at the town hall and it was felt that no better memorial could be provided than an endowed bed in the infirmary with which he had been so long and so closely associated. A sum of £1000 had been contributed by 160 persons and invested on trust to endow a bed in ward No. 12 (male). The tablet affixed to the bed at the ceremony is of oxidised repoussé copper work and is inscribed, "In memory of John Lawrence, this bed is endowed by many friends as a mark of their esteem and affection, and in recognition of the services rendered by him to the city and to this institution."

Liverpool School of Tropical Medicine.

The Treasury, at the instance of the Colonial Office, has made a grant of £500 a year to the Liverpool School of Tropical Medicine.

Nov. 14th.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Typhoid Fever in the Rhondda Valleys.

THE water-supply of the two Rhondda valleys is derived mainly from gathering grounds situated at the head of each valley and specific contamination, though possible, is not very likely to occur. There are, however, subsidiary supplies which are not at all well safeguarded for they are derived from mountain streams which are readily accessible to pedestrians and wayfarers who are constantly passing from one colliery district to another. One of these smaller gathering grounds is situated about the middle of the large valley and is bounded on the upper side by the main road connecting the two valleys. The water is collected in a small reservoir holding 50,000 gallons and is filtered through sand before being distributed to the 1200 houses in the immediate neighbourhood. On Nov. 8th the large number of cases of typhoid fever reported from this particular district indicated an outbreak of the disease, either milk- or water-borne. Up to Nov. 12th no fewer than 150 cases were reported and there appeared little doubt that the water-supply in question was implicated. Fortunately it was possible to cut off the supply from the suspected source and to provide an alternative service. The fever hospital erected three years ago is within the area of the outbreak and although there is nominal accommodation for only 38 beds there are now over 60 cases of typhoid fever being treated in the wards. During the past few years there have been several similar outbreaks of typhoid fever in the Rhondda valleys but none have assumed such alarming proportions as the present one. One outbreak which occurred in the small valley in 1900 was due to the peaty discolouration of the

water from the mains of the Pontypridd Waterworks Company. The inhabitants of one district would not drink this discoloured water and procured some from a mountain stream which was specifically contaminated, the result being that of 100 houses concerned 46 were infected with typhoid fever, 68 persons being attacked with the disease and only 58 recovered An effort was at that time made by the urban district council to compel the waterworks company to filter efficiently the water supplied by it, but it is still very frequently discoloured and it will probably require another such outbreak to rouse the council to a sense of its responsibility. In order to be in a position to abandon the dangerous subsidiary supplies in the large valley it is necessary for the council to carry out its scheme for increasing the supply at its own waterworks for which Parliamentary powers were obtained many years ago The blame for neglecting to carry out the undertaking must rest entirely upon the members of the district council, for the present medical officer of health and his predecessors have insisted year after year upon its urgency

Memorial to the late Mr C W. Chubb of Torpoint

On Nov. 6th the Rev O Kennerley dedicated at St James's Church, Torpoint, Cornwall, two handsome brass five-light candelabra which have been presented by the congregation of the church as a memorial to the late Mr C W Chubb, M R C S Eng, and Mrs Chubb The candelabra, which are five feet high, have been placed within the sanctuary of the chancel and bear a suitable inscription.

Nov. 14th

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Question of Age Limit at the Edinburgh Royal Infirmary

IT may be remembered that the managers of the Edinburgh Royal Infirmary decided to institute an age limit for the ordinary honorary physicians and surgeons on the staff of the infirmary, while exempting from its operation the physicians and surgeons who were at the same time professors in the university At the meeting of contributors to whom this motion was submitted it was proposed that the age limit should be made applicable to all the members of the staff, whether university professors or not This proposal was carried [illegible] was not upheld but it [illegible] consideration of the wh[illegible] of five subscribers and five managers The report of this committee was made public in the end of last week The report summarises the position as given above up to the present It then indicates that the committee had consulted [illegible] e of Physicians, the Royal [illegible] of the Royal Infirmary, and [illegible] the University approved of the institution of an age limit The committee had also fully investigated the question of the relations between the University and the infirmary and states that while it was ascertained that the infirmary had entire power in the matter of the appointment and duration of office of professors as members of the staff of the infirmary no instance had occurred in which a professor had been deprived by the managers of his position in the infirmary during his tenure of a university chair The joint committee came to the conclusion that it was inexpedient to fix a compulsory age limit for the retirement of members of the medical [illegible] urgical staff from [illegible] d it submitted the [illegible] contributors — [illegible] or the members of the ordinary [illegible] d [illegible] passed on Jan. 4th last requiring professors to retire from the positions which they occupy on the staff on attaining the age of 65 ye[illegible]

The adoption of these recommendations, if approved by the contributors, will, in the view of the committee, render it superfluous to fix an age limit in the meantime In the case of the ordinary medical and surgical staff a rule prescribing an age limit of 65 would, looking to past experience, practically never come into operation [illegible] or to [illegible] t. The committee [illegible] have each case exercise [illegible] a wise [illegible] and of the medical [illegible] school

This report was signed by eight of the joint committee and dissented from by two The meeting of contributors to consider this report was held on Nov 14th The meeting was small and the dissenting minority on the joint committee had the vote of the majority in this meeting and an amendment was carried by 33 votes to 12. "That all members of both medical and surgical staffs, including professors, should retire at the age of 65 years"

Nov 14th

IRELAND.

(FROM OUR OWN CORRESPONDENTS)

Mater Misericordiæ Hospital, Dublin

THE address inaugurating the new medical session was delivered at the Mater Misericordiæ Hospital, Dublin, by Sir Christopher Nixon on Nov 9th In connexion with the new pathological laboratory which was built at the hospital, he said that the notion that a great teaching hospital was an institution purely for the treatment of the ailing and suffering was giving way before the demands of modern medical science

Royal College of Surgeons in Ireland

Sir Charles Ball the present representative of the Royal College of Surgeons in Ireland on the General Medical Council, has announced that he will not seek re election. Mr H R Swanzy (Vice-President) and Sir Thomas Myles have notified their intention to present themselves for election

Trinity College, Dublin

Dr E H Bennett, who has occupied the chair of surgery in the School of Physic, Trinity College, for so many years, has, at his own request, been relieved from the active duties of the office and Mr E H Taylor has been appointed his assistant Dr Bennett will continue to act as surgeon to Sir Patrick Dun's Hospital

Ulster Medical Society

At the first meeting of the Ulster Medical Society for the session 1904 05 the new President (Dr W Calwell) gave his inaugural address, taking as his subject Certain Phases in the Treatment of Dyspepsia The processes of nutrition, he said, might be divided into those due to ferments, where molecules of a higher potential energy were reduced to a lower but at the same time rendered capable of absorption. [illegible] of peptone was raised [illegible] globulin albumin, and [illegible] which in the liver was [illegible] haride glycogen was found. [illegible] ydrate was assimilated by [illegible] ch was the highest degree of [illegible] part remained in solution, [illegible] The katabolic changes were [illegible] obscure but ended in urea, carbon dioxide, and water. It was not difficult to see how easily these delicate and intricate processes could be thrown out of gear; for instance, 38 artificial methods for the production of glycosuria, which meant glycohæmia, had been recorded. Malnutrition might thus be a perversion of ferment action; of protoplasmic action, preparatory in the intestinal villi and liver or final and assimilative in the tissues throughout the body, or of disintegrative action The metabolism of starvation might be studied in cases of cardiac stenosis or of advanced gastric ulceration An excess of food probably overloaded the intestinal canal and taxed the assimilative powers generally Alluding to the diet in sanatoriums for tuberculous subjects, he believed that it was more a case of deficient feeding before going to the sanatorium than of overfeeding afterwards which led to a marked rise in weight The deleterious effect of excess of sugary food seemed to have a reducing power on the natural "protective substances" of the body, [illegible] the variability in this [illegible] the large class of dis[illegible] disturbance of metaboli[illegible]

several cases were cited in which various manifestations, such as glycosuria, severe headache, with high-tension pulse, and even convulsions, were present, in addition to the usual symptoms, and where it was likely that these manifestations were due rather to the product of disturbed metabolism than to any initial toxin. The treatment in this acute mucosa-hepatic class was mercury in a purgative dose, a saline, a farinaceous mild diet, and salicylate of sodium and potassium; empirically, this last drug (salicylic acid) when combined with potash was found to be of immense service; whether the scientific fact that it caused an increased output of uric acid was explanatory or not it was hard to say. Gout was probably a disease of the chronic mucosa-hepatic type occurring in a person with a special diathesis, mostly inherited, and defective eliminatory powers. Of the large class of disease, such as "flatulence," "acidity," "biliousness," and "migraine," they were not gout, but allied to gout; for these he ventured to coin the name "para-podagrous." Of the primary disorders of metabolism might be cited the "composite" type of diabetes mellitus, where the dextrose molecule seemed to escape from the huge proteid molecule of the tissues; also obesity and that curious class in which nervous influence and strong emotion more particularly were present with more or less gastro-intestinal trouble, phosphaturia, azoturia, baruria, oxaluria, and, as has been lately pointed out, chiefly by French clinicians, the cases of renal inadequacy for chloride of sodium and its connexion with dropsy and the excessive amount of the salt passed in cirrhotic kidney. Finally, the speaker made an appeal for scientific work to become more clinical and clinical work more scientific. On the motion of Dr. J. Walton Browne, seconded by Professor J. A. Lindsay, a hearty vote of thanks was accorded to the President

The Royal University of Ireland.

At a meeting of the council of the Royal University Graduates' Association held in Belfast on Nov. 7th motions bearing upon the recent Crown appointments to the senate were unanimously adopted, condemning in language of marked disapproval the action of the Government in the matter.

The Belfast Workhouse Sanatorium.

In reference to the sanatorium for consumptives at the Abbey, Belfast, the board of guardians have decided to adopt a plan the principle of which combines both sleeping and sitting accommodation, the approximate cost being £1250 each hut.

Nov. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Dr. Variot's "Goutte de Lait" at Belleville.

IN connexion with the debated subject of the employment of different kinds of milk for the artificial feeding of infants special interest attaches to the dispensary bearing the picturesque name of "Goutte de Lait," which has been carried on at Belleville by Dr. Variot for the last nine years. It may be here remarked that in France institutions for the benefit of suckling infants are of three kinds. First, there are the *crèches* (day nurseries), to which mothers who are at work all day long bring their infants in the morning, taking them away at night, and where the infants throughout the day obtain nourishment either from wet nurses or from feeding bottles. Infants may also be brought for advice as out-patients to the obstetric departments of most of the Paris hospitals, and the women who have been delivered there come once a week, bringing their infants to be examined by a medical man. The infants, each of whom has a special card (*fiche*), are weighed and in accordance with their weight and general health the mothers are advised as to the proper method of feeding them, by giving them less milk if too much is taken, and by increasing the supply if the mother's milk is insufficient. In the latter case the mother comes every morning to the hospital for bottles of sterilised milk the number of which is decided by the medical man and entered on a card. These bottles are filled by hospital officials in a laboratory where the milk is sterilised in a Sohxlet apparatus in graduated bottles stoppered by means of an indiarubber disc. In the event of the medical man being satisfied that a woman is quite unable to suckle her infant even partially artificial feeding is resorted to and the woman receives every day at the hospital the necessary number of bottles of milk as ordered by the medical man. The bottles each contain the amount of milk to be given at one time and the woman carries them home in a basket. A sum set apart for this purpose by the Assistance Publique enables the milk to be distributed free of charge and the mothers every morning bring back the empty bottles which had been given to them full of milk the day before. Only broken bottles have to be paid for. The "gouttes de lait" are institutions of a different nature. The infants brought there by their mothers are all bottle-fed and there is no age limit. The medical man of the establishment examines them each week in order to observe their state of health and to give directions as to feeding them. The requisite amount of sterilised milk is distributed not free of charge but at half the ordinary retail value. The dispensary at Belleville in which Dr. Variot has established his "goutte de lait" is one of the oldest institutions of its kind and is at the present time very prosperous. The milk which he distributes has been heated to 108° C.—i.e., above the boiling point of water—is supplied by purveyors in Neuchatel and Normandy, and is sold to the mothers at the rate of 30 centimes per litre instead of 60 centimes. The institution is situated at No. 126, Boulevard de Belleville, in one of the most populous working-class quarters of Paris. The premises consist of a wooden house, extremely clean, containing a large, well-ventilated, and well-lighted consultation room, a laboratory, and a pharmacy; on the first floor there are some small rooms for cases requiring surgical attention. Dr. Variot, surrounded by his assistants, gives advice every Friday morning. The system which he follows is scientific and exact. Commercially sterilised milk for 750 bottle-fed infants is distributed every day, the quantity amounting to about 150 litres per day, from 4000 to 5000 litres per month, and from 50,000 to 60,000 litres per annum. The total quantity of milk distributed at the Belleville Dispensary now exceeds 400,000 litres in ten years. The distribution of this milk at half price to the infants of the poorer classes in Belleville was commenced at the end of 1892; after an interruption of a year the supply has continued regularly since 1895. More than 3000 infants during the first year of life have been reared on these 400,000 litres of milk. The milk is cow's milk, the nutritive value of which has been ascertained, sterilised soon after milking in rooms kept for the purpose. It is run into half-litre bottles corked before sterilisation; the corks are kept in position by iron hooks during the superheating to 108° C. and are paraffined after the sterilisation. The milk is in this way perfectly sterilised, it is very easily carried to Paris in boxes, and is very convenient for distribution on the large scale to the working classes. It can be easily kept for eight or ten days without any deterioration even during the heat of summer; only one-half litre bottle in 1000 is spoiled during the summer and only one or two in 3000 during the winter. For the feeding of an infant the contents of each half-litre bottle are subdivided by the use of a graduated feeding-bottle and the mothers are strictly charged to measure the milk each time that the child takes it. The bottle is re-corked when milk is withdrawn and the sterilisation is practically maintained until the milk is finished—a period of 12 hours at the most. The effect produced by the milk is noted regularly once a week at least; the infants are weighed without clothing and their weights are entered on separate cards. If the infant becomes ill he or she is taken to the dispensary for advice. Infants of all ages up to one year are admitted to the dispensary whether fed with the bottle alone or with the bottle and the breast together, or with the breast alone. A good many of them are in a state of wasting, their growth being retarded through gastro-enteritis caused by unwholesome milk and the inexperience of the mothers. By the weekly inspections of from 150 to 200 infants much precise information may be obtained with respect to the rearing both of normal children and of those suffering from disease, such as tubercle and congenital syphilis. After a patiently continued experience of ten years in this special field of observation Dr. Variot adheres entirely to his first conclusions which he submitted to the international congress of pediatry held in 1900. He finds that the nutritive value of milk that has been heated to 108° C. is as satisfactory as that of milk sterilised in a Sohxlet apparatus, or boiled milk, or pasteurised milk. The infants reared on this milk are not only those whose condition is normal but those who show

symptoms of wasting It may often be given even to those in a state of advanced atrophy and suffering from Parrot's athrepsia The proportion of infants incapable of assimilating this milk is less than 3 or 4 per cent of the total number Infantile scurvy has not been observed in any case during ten years and among more than 3000 children Infants who are taken proper care of do not suffer from rickets, symptoms of rickets appear if they are overfed and if they are given preserved food too soon It does not appear that the slight reduction of the proportion of phosphates and citric acid or the destruction of the enzymes or living ferments in the highly heated milk is of sufficient importance to interfere with its value as a food All theoretical criticisms directed against sterilisation of milk, and especially against raising it to a high temperature, are contradicted by the extremely numerous observations made at the 'goutte de lait' in Belleville Presumably it is from want of experience that men of the scientific standing of Professor von Behring have questioned the nutritive value of milk sterilised by heat and have suggested a method so dangerous as the use of formalin The objections to the highly heated milk appear to be as follows The heating makes it slightly yellow and the butter tends to collect on the surface after a journey It often causes prolonged constipation which requires the administration of laxatives, but this slight interference with the gastro-intestinal functions is compensated by the effect of the highly heated milk in preventing summer diarrhœa Anæmia is also more common among infants taking this milk than among those taking breast milk Such is a comprehensive view of the very interesting work carried on by Dr Variot There is no denying that it as well as 'gouttes de lait' in general are discountenanced by th the ground that er cour e is above e gouttes de lait make neglect of this criticism Dr Variot replies that are already weaned and it is then mothers In the maternity hospitals on the other hand mothers are fully informed as to the advantages of suckling their infants

Nov 15th.

SWITZERLAND

(FROM OUR OWN CORRESPONDENT)

Vital Statistics

t been published by The population of in 1899 to 3 391 645 en fairly stationary varying only from 25 128 in 1902 to 25 537 in 1900 and numbering 25 283 in 1903 The number of births in 1903 was 93 824 and that of deaths was 59 626 the corresponding death rate being 17 6 per 1000 The death rates from 1899 to 1902 were 17 6 19 3 18 0 and 17 2 per 1000 About one fifth of all the deaths were of infants under one year of age (12 506 in 1903)

Immediate Operation in Appendicitis

At a meeting of the Medical Society of Zurich held on Oct 22nd Dr Hacberlin gave an account of 14 cases of acute and four cases of chronic appendicitis which he had operated on at his private clinique during the last two years According to the classification of Dr O von Brigners he had four cases of simple epityphlitis three cases of purulent epityphlitis and seven cases of diffuse peritonitis Of the latter category he lost three cases—one a baby aged 18 months, and two women aged 60 and 76 years respectively. He made especial reference to the case of a child aged seven years where the clinical symptoms and the pyrexia were inconsiderable the temperature varying from 99° to 100 3° F and only the pulse rate varying from 108 to 120 gave rise to suspicion Operation on the fourth day revealed gangrene of the appendix The patient was discharged on the thirteenth day The chronic cases which were misleading with regard to diagnosis as they manifested gastric symptoms were also instructive Dr Hacberlin recommended operation as soon as the diagnosis was established and the experience of other surgeons such as Riedel and Sprengel went to prove that cases of perforation were then rarely met with In uncomplicated cases the patient might almost be promised a rapid recovery Patients were more ready to consent to the surgeon's proposal of an operation during an attack than after it

Sanatorium Treatment of Tuberculosis

Dr Staub the medical superintendent of the Zurich Sanatorium at Wald for tuberculous patients of the poorer class has just published his fifth annual report dealing with the events of the year 1903 284 patients were admitted and 266 were discharged of whom 240 were suffering from pulmonary tuberculosis He gives a *résumé* of 219 patients who stayed more than one month at the sanatorium The average duration of their stay was 125 days a slight increase as compared with the previous year 41 per cent were in the first stage 23 per cent were in the second stage and 36 per cent were in the third stage 81 per cent of all the patients were discharged in an improved condition Dr Staub makes an interesting statement as to definite results obtained They compare very favourably with those of German sanatoriums situated in the lowlands and supply an additional proof that the factor of elevation above sea level must not be underrated in the treatment of pulmonary tuberculosis Investigations two and three years after discharge proved that 92 6 per cent of the patients in the first stage 75 3 per cent of those in the second stage and 42 4 per cent of those in the third stage were still in full work having been able to resume their previous occupations These data speak for themselves and Dr Staub is so far encouraged that he does not wish to shut the doors of the sanatorium to suitable cases even in the third stage Even of the patients discharged in 1899 the reports in 1903 were favourable According to the more or less advanced stage of the disease on admission 90 per cent 45 per cent and 7 3 per cent respectively were fit for work At a sanatorium the majority of patients increase in weight An investigation proved that from 70 to 80 per cent of the patients treated at Wald still kept up their extra weight for from two to five years after discharge The financial state of the sanatorium was satisfactory the voluntary contributions of the cantonal authorities amounting to £672 and those of the public to almost £800

Zurich Nov 14th

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

The Plague

Two fatal cases of bubonic plague have occurred at East wood New South Wales Both patients were employed, one as groom the other as housekeeper at the same place and the groom had been handling produce from Sussex street Sydney Rats had been also dying about the house and the assumption is that infected rats were conveyed in fodder from Sussex street The authorities have recognised that nearly every outbreak of the disease starts from the neighbourhood of this street in which are many old dilapidated buildings used as produce stores Orders have been issued for the demolition of these buildings many of which belong to the Harbour Trust

Infectious Diseases in Victoria

The returns presented to the Board of Health Victoria, for the last fortnight showed that there were only two cases of typhoid fever neither of which proved fatal Last year however there were ten cases of typhoid fever and two of them ended fatally The number of cases of diphtheria was in excess of last year though there were fewer deaths Last year there were 66 cases and four deaths while this year though there were 79 cases there were but three deaths There were the same number of cases of scarlet fever reported this year as last— 9—but whereas one case proved fatal last year there were no deaths to report this year

Sanitary Condition of Mines

The municipal sanitary inspector at Broken hill recently made an application to the local police magistrate for an order to inspect the sanitary condition of the Broken hill proprietary mine and its underground workings The application was refused The chief inspector of mines stated that all mining inspectors were specially instructed to see that sanitary arrangements are properly carried out New regulations have been drafted to come into operation next month with special reference to preventing ankylostomiasis

Mortality among Boarded-out Children.

The board of health of Victoria recently waited on the Minister of Health and called his attention to the conditions under which infants were boarded out in this State under the Infant Life Protection Act. It appeared that the mortality among them during the past three years had been close on 14 per cent. In South Australia the mortality in 1901 was given at 8 per cent. and in 1902 at 4·7 per cent. It was clear that the Victorian Infant Life Protection Act or its administration was at fault. It was generally understood at the time that numerous parties in the metropolis concerned in the protection of infant life were agreed as to the advisability of amending the law in these and other directions, as set out in an amending Bill. The board accordingly respectfully asked the Minister's consideration of the Bill or to have official inquiry made as to the cause of what appeared to be exceptional mortality among the boarded-out infants of the State. The Minister replied that he was in favour of several of the points mentioned. He would go through the Bill for the purpose of seeing how far he could meet the board in its request.

Mentally Deficient Children.

In the report of the State Children Relief department, recently presented to the Parliament of New South Wales, is the following paragraph :—

Reference has been made in previous reports to the mentally deficient —the children of feeble mind who, not being imbecile and eligible for admission into the hospitals for the insane, are now placed in the cottage homes because they cannot be accommodated elsewhere. Their presence in these homes is, as has been pointed out, an error, because the homes are only for the physically sick. There are no facilities for properly training and educating the mentally infirm and no means of affording them. Capable of being educated, the children should be placed in a separate home under a specially trained teacher, where they can receive that individual care and instruction which alone will render them partly, if not wholly, self-supporting. Such a home has been established in South Australia with gratifying results; and the system has been successfully applied in England and America. The children of this class under the board's care are numerically few, but the number in the State is large, and their appropriate care is a matter of very grave social concern. The national system of education does not include any provision for their necessary specific instruction, and experience has shown that their undeveloped mental condition renders them peculiarly liable to degenerate into criminals, lunatics, or, in the case of females, to fall a victim to lust. The consensus of opinion is that mental deficiency is singularly subject to the laws of heredity.

A Faculty of Dentistry at the University of Melbourne.

The council of the University of Melbourne has agreed to institute a faculty of dentistry and a degree of bachelor of dental surgery. The curriculum is to be that at present prescribed by the Dental Board but matriculation is to be a necessary preliminary.

Donation to the Museum, Medical School, Melbourne.

The widow of the late Dr. Aubrey Bowen has given £500 to complete the fittings of the pathological museum at the University of Melbourne. Under the provisions of the Surplus Revenue Disposal Bill every private donation of this kind to the University brings an equal amount to its funds from the State.

Inebriates Bill.

A Bill to provide for the care, control, and treatment of inebriates has been circulated in the State Legislative Assembly of Victoria. The principal provision is that empowering judges of the supreme or county courts, the Master in Lunacy, or any police magistrate to order an inebriate to be placed for any period not exceeding 12 months in an institution named in the order or under the care of attendants who are in turn under the control of the official making the order. An order may also be made placing an inebriate under the care of persons named in his own house, the house of a friend, a hospital (public or private), or an institution for a period not exceeding 28 days. Before any order is made it has to be proved to the satisfaction of the court that the accused person is an inebriate, a medical certificate and corroborative evidence must be submitted, and the alleged inebriate must be inspected. Medical practitioners are required to specify the facts upon which they have formed their opinions and to distinguish facts observed personally from those communicated by other persons. No order is permitted to be made upon a certificate based on information obtained at second-hand, or from medical practitioners who are interested directly or through relatives in any institution. Inebriates thrice convicted of an offence "in which drunkenness is a necessary ingredient" may be ordered to be placed in any institution which the Government may establish for the purpose for from six to 12 months and on the order of a judge or the Master in Lunacy such periods may be altered from time to time by extensions not exceeding 12 months each.

Obituary.

Great regret has been felt at the news that Dr. Angus Money died at Randwick on Sept. 2nd. He had been under medical treatment and was found dead in his bed in the morning. Dr. Money came to Sydney in 1892 and quickly established a good practice. But as the number of patients increased the strain of heavy work began to tell on his health. At the beginning of last year he took a trip to Vancouver and seemed better for the rest and change. His course, however, was run. He was only 48 years of age and leaves a widow and two children.

News has been received of the death at Ulverston, England, of Dr. Patrick Moloney, late of Melbourne. Dr. Moloney was the first medical graduate of the University of Melbourne. For over 20 years he was physician to the Melbourne Hospital. At one time he was one of the leading physicians in Melbourne and had a very large practice. He also had literary leanings and contributed frequently to the Melbourne *Punch*, the *Australasian*, and the *Melbourne Review*. His writings were witty, cultured, and graceful. In the early days Dr. Moloney was one of that talented coterie of which Marcus Clarke, Adam Lindsay, Gordon, Kendall, and Burney were members. He had a handsome, commanding presence, a genial manner, and a ready wit. As an after-dinner orator he had no equal in his best days.

Another member of the medical profession in Melbourne passed away on Sept. 28th in the person of Mr. Thomas Hewlett, who had practised in Fitzroy since 1862. During his long residence he made a very large circle of deeply attached friends and was always held in the highest esteem by the community and the medical profession. He was born in Abingdon, Berkshire, where his father was incumbent of the parish. He studied at St. Bartholomew's Hospital, London, and took his M.R.C.S. Eng. in 1858; in the same year he was appointed assistant surgeon to the 2nd Battalion of the 19th Regiment, which served in India. He came to Australia in 1862. In 1882 he was elected President of the Medical Society of Victoria. For many years he was an active member of the Medical Board of Victoria.

Inspector-General of Insane, Victoria.

Dr. W. E. Jones has been appointed to the new position of Inspector-General of Insane in Victoria.

Oct. 3rd.

Obituary.

JOHN HARKER, M.D. HEIDELB., M.R.C.S. ENG., L.R.C.P. EDIN.

ON Nov. 12th there died at Hazel-grove, Carnforth, one of the oldest medical practitioners for many miles around the town of Lancaster. Many of the younger practitioners in the town and neighbourhood will not remember the days when he held a foremost position in the social and medical life of Lancaster, but all are familiar with his well-known presence and kindly greeting and not a few of the older men will look back on the past to the days when they were entering on the practice of their profession and sigh to think that the man who extended to them such a kindly welcome is now no more. As a practitioner of the healing art John Harker was in the first rank. His treatment of disease was scientific and as an operator he was careful, cleanly, and full of judgment, and his manner with his patients was courteous and sympathetic. He was well read in many subjects beyond his profession. Natural history, botany, archæology, and heraldry were all favourite studies.

Born at Kendal in the year 1834 he was educated at the grammar school of that town. He was apprenticed, as was the custom in those days, to Mr. Gough, a surgeon of more than local repute, to whose influence could doubtless be traced that love of nature which was such an integral part of John Harker's being. His medical studies were continued at the old Royal School of Medicine, Manchester—afterwards the Owens College—where he greatly distinguished himself, gaining numerous prizes. He

qualified as M R C S Eng L S A in 1856 afterwards taking the I R C P Edin and the M D Heidelberg In 1857 he was appointed house surgeon to the Lancaster Infirmary and Dispensary which office he held for a year, when upon entering private practice in the town he was elected honorary medical officer to the institution and afterwards one of the trustees of its funds This position he held with dignity, skill and wisdom for 41 years and when he finally retired from the active staff to the great regret of his colleagues, he was elected by the committee honorary consulting medical officer to the new Royal Lancaster Infirmary as a mark of their esteem and an appreciation of his long and valued services While a student he was elected the first scholar of the Manchester Royal School of Medicine, obtaining four medals He was an Associate of the Owens College and a Fellow of the Sanitary Institute and of the Archæological Association He was also a member of the British Medical Association being President of the Lancashire and Cheshire branch in 1886 He was also medical officer of health of the borough of Lancaster and for the rural district for many years He was a member of the County Club and in October 1886 upon his retirement from practice he was placed upon the commission of the peace for the county of Lancashire He took the keenest interest in the building of the new Royal Lancaster Infirmary and was a most generous contributor to the building fund its present completeness being in more ways than one due to him He married in 1866 a daughter of the late Mr Dawson of Aldcliffe Hall Lancaster

DEATHS OF EMINENT FOREIGN MEDICAL MEN—The deaths of the following eminent foreign medical men are announced—Dr Gailleton professor of dermatology in the University of Lyons—Dr Wurtzbaum formerly professor of surgery in Amsterdam—Dr Perochaud professor of therapeutics in the Nantes Medical School

Medical News.

UNIVERSITY OF CAMBRIDGE—The first report of the recently appointed Studies and Examination Syndicate has just been issued It includes the important proposal that candidates for all degrees (including degrees in medicine) shall be allowed to offer French or German for one of the classical languages—Latin and Greek Both of these have been compulsory since 1822 It is also proposed that "set books shall no longer be prescribed for any of the language papers and that Paley's Evidences shall be discontinued The text in English is to be made more exacting and of the subjects—Scripture history physics and chemistry—two must be taken by all students The proposals will come up for discussion by the Senate on Dec 1st and already the forces for and against the suggested reforms are organising their strength The issue is not easy to predict but some thing will turn on the vote respecting the analogous question which is about to be taken at Oxford—Dr Baker F R S and Mr F H Neville

Members of the General Board

[illegible] special pathology—Walsingham [illegible] endowment of [illegible] medals have been awarded to Mr R P Gregory Fellow of St John's for research in botany and to Mr R Lucas Fellow of Trinity for research in physiology—The following degrees were conferred at the congregation on Nov 10th—

Bachelor of Medicine—A Wyle Lemprière G F Davidson and A H Moore Gonville and Caius and J W W Hutzmann Christ's

Bachelor of Surgery—A H Moore Gonville and Caius

CONJOINT EXAMINATIONS IN IRELAND BY THE [illegible] AND THE ROYAL COLLEGE [illegible] held recently the following

SUPPLEMENTAL PRELIMINARY EXAMINATION

With Honours—O W J Wynne

Passed—J A M Byrne C P Corbett L J Curran Thomas Duncan L M Ewart, Charles Greer Joseph Marmion H S Meade John Meldon Roderick O'Connor R S White and W H Wray

THIRD PROFESSIONAL EXAMINATION

Passed in all subjects—A P Barrett M D Healy C W O'Keeffe John Prendiville C H Wallich and Robert Wally

Completed the examination—L A Andrews C J Burgin T S Blackwell John Burke W J Connolly R L O F Dickinson, T A Fisher Corrin Gordon J L Hogan John McQuillan William Roche William Sheehan Edmund Smith J R Talbot, N R Ussher J J Vasquez and G I Wright

FINAL EXAMINATION

Passed in all subjects—J R P Allin

Completed the examination—Michael Ambrose E C Byrne, H A Cecil Selby Clare F X Costello H B Evans P L Harrison, M C O Healy P C Jennings R W D Leslie M J Loghran V H McSwiney F C Mulligan J C Murphy T J O'Donnell B H Peters John Pratt S H Robinson C J Swanton and Edward Walsh

DIPLOMA IN PUBLIC HEALTH

Honours—John Arnallt Jones M D Durh M R C S Eng L R C P Lond L S A L

Passed—Samuel John James Kirby L R C P Edin M R C S Eng, L S A Lond Frederick Charles William Fell L R C P & S Edin, James Wood M B Ch B Victor and Thomas James Wright, L R C P & S I R A M C

LITERARY INTELLIGENCE—Messrs Longmans, Green and Co will publish early in December "A Text book of Medical Practice by various contributors edited by William Bain M D Durh M R C P Lond with 75 illustrations Apart from the practical character of the book the special features are that the anatomy histology and physiology of each organ or system precede the description of its diseases and that the various sections are contributed by general physicians and specialists

UNIVERSITY OF OXFORD—The following have been appointed examiners in medicine and in the preliminary natural science examinations—Nevil V Sidgwick M A, Fellow of Lincoln College in organic chemistry, Arthur Thomson M A Exeter College professor of human anatomy in human anatomy Ralph Stockman M D Edin, in materia medica John S Fairburn B M Magdalen College in midwifery German Sims Woodhead M D Edin in pathology John Dixon Mann M D St And in forensic medicine and public health Leonard E Hill M B Lond in human physiology, Arthur L Ormerod D M, New College in forensic medicine and public health, Edwin S Craig M A University College in elementary mechanics and physics James L Marsh M A Balliol College in elementary chemistry, Walter Ramsden D M, Fellow of Pembroke College in elementary physiology and Edwin S Goodrich M A Fellow of Merton College, in elementary zoology *Radcliffe Travelling Fellowship*—An examination for a Radcliffe Travelling Fellowship of the annual value of £200 and tenable for three years will be held in *Hilary Term 1905 commencing* on Tuesday, Feb 28th The examination will occupy four days Papers will be set in physiology pathology, and preventive medicine and a subject will be proposed for an essay There will also be a practical examination in pathology Intending candidates should send their names addresses, and qualifications to Professor Gotch, University Museum, on or before Saturday Feb 11th (Further particulars will be found in the *University Gazette* of Nov 8th 1904)

VICTORIA INFIRMARY, GLASGOW—The second biennial dinner of the past and present resident assistants of this infirmary was held in Glasgow on Nov 11th Dr William Dove Macfarlane jun of Busby who presided in proposing the toast of The Victoria Infirmary remarked that many changes had taken place in the infirmary since he was a resident assistant 13 years ago [illegible] logical department and nurses [illegible] pensary had been added and [illegible] in the course of construction The time spent in the infirmary he considered the happiest period of his life The infirmary had been fortunate in its staff Its first superintendent Dr D J Mackintosh now superintendent of the Western Infirmary Glasgow had made a name for himself as an authority on hospital construction and he was particularly pleased to couple this toast with the name of the present superintendent Dr D O Macgregor a friend of his for 20 years Dr Macgregor replied in a humorous and very happy speech Dr Alexander Napier proposed The Resident Assistants Past and Present He was not sure whether it was not the resident assistant who made the infirmary he—the resident assistant—certainly kept the chief in order referring in a quiet and not very pointed way to certain features in the case which he supposed his chief had overlooked It was a joy to him to meet again so many of his former assistants Dr Alexander Prentice (Kilmarnock) a former resident, and Dr Graham a present resident suitably replied Dr J Grant Andrew proposed

radio-active powder. The following is what was observed. The applications of emanations in the form of radio-active powder or radio active water did not cause any injury to normal healthy tissue and did not produce any sore in it, as frequently occurs with the application of radium radiations. With the aid of these emanations the whole of the radio-active energy may be used with respect to such internal tumours as are inaccessible to radium radiations. With cancer, for example, in the œsophagus by the introduction of radio-active bismuth with water into the interior the tumour may be gradually removed, as consequent on the passage through the narrow part of the œsophagus the bismuth settles on the surface of the cancerous growth and there exercises its radio-active energy. In like manner with the injection of radio-active water into the sore itself the progress of destruction was arrested, whilst not the slightest injury to the healthy tissue was noticeable, nor yet the formation of abscesses on the surface of the tumour. In every case where emanations in the form of radio-active powder or radio-active water were used the same results always followed—under the influence of radio-active energy the cancerous substance is gradually destroyed." It is not pretended, says the report in conclusion, that these first results are conclusive, though they are sufficiently striking to insure attention being directed to this method. The report is of interest as indicating a new method of making use of radio-active emanations. It is, of course, too soon to form any idea of its probable value but there seem to be considerable possibilities in Dr. Braunstein's suggestions. So far the treatment of cancer by means of radium has been very disappointing and it is to be hoped that other observers will give this new method a trial and that more favourable results may be obtained.

THE APPEAL ON BEHALF OF MISS E. B. PELLATT, L.S.A.

THE treasurer, Surgeon-Colonel F. H. Welch, desires to acknowledge the receipt of the following sums, completing the list of donations to this fund:—

	£	s.	d.		£	s.	d.
Miss Ormiston	2	0	0	Miss Greenwood	0	10	6
Dr. Lilian M. Chesney	0	10	6	Collected by Mr. Robert Turner	1	10	6
Dr. S. W. Sutton ...	2	2	0	Dr. F. H. Champneys ...	2	2	0
Mr. H. A. Hinton ...	2	2	0	H. C. V.	1	1	0
Rev. E. L. C. Clapton	0	10	6	Rev. F. Parnall	1	0	0
Miss Grundy	0	10	0	Dr. Annette M. Benson	2	2	0
Mrs. Sparrow	0	10	0	Mrs. Bryant and old pupils of the North London Collegiate School, per Miss Grace Toplis	33	4	0
Miss Pellatt	2	0	0	Old pupils of the Missionary Union, per Miss Buchanan	17	8	0
Dr. Elizabeth Beatty...	0	10	6	Dr. Harriet E. Knight	0	10	0
Wood Green and District Medical Society	3	0	0				
Mr. A. J. Elkington ...	1	0	0				
Rev. H. Whittaker ...	0	10	6				
Mr. A. C. Hackforth...	0	5	0				
Miss Agnes Catchpool	0	5	0				
Miss E. P. Pratt... ...	0	5	0				

THE VISIT OF FRENCH PHYSICIANS AND SURGEONS TO LONDON.

IN connexion with the recent visit of French physicians and surgeons to London the *St. Bartholomew's Hospital Gazette* for November contains a supplement in the shape of a humorous drawing of various members of the medical profession in France. The original cartoon was drawn by M. Barrère and presented to the students of St. Bartholomew's Hospital, whose smoking room it now adorns.

A PEN-SHAPED SPUD FOR OPERATIONS ON THE SKIN.

WE have received from Dr. Dreuw of Altona, assistant in Dr. Unna's dermatological clinic, a description of an instrument which he has found serviceable in some minor operations on the skin. The objections to the use of any form of knife are (1) that it almost invariably alarms the patient; and (2) that when portions of the skin are to be removed for histological examination the knife is apt to remove only the surface and to leave the subjacent vascular structures. The "pen" is quite like an ordinary steel writing pen except that the edges rise more abruptly from the point and project in front of the hollow portion which fits into the pen-holder. Before use it is sterilised either by boiling or by antiseptics, such as spirit of soap (Seifenspiritus—i.e., an alcoholic solution), alcohol, or benzine. A fold of skin is pinched up with the thumb and the forefinger, the part to be excised being at the summit and marked with ink if necessary. The skin is then thoroughly frozen with ethyl chloride and by thrusting the "pen" into the fold of skin the part in question is at once detached. The "pen," the price of which is 1 mark, is made by Herr C. W. Bolte, 20, Rathausstrasse, Hamburg. This firm also supplies a "pincette" which fits the "pen" and prevents possible injury of the operator's left hand.

THE SUSSEX MEDICAL BENEVOLENT SOCIETY.

A SOCIETY called by the above title has just been formed and we have received a copy of the rules. The subscription is either one guinea per annum or 25 guineas for life membership. The objects of the society are to aid the widows and children of members duly qualified who have died in indigent circumstances, and to aid the sisters of such members, being single women or widows, who have lived with their brothers as their housekeepers for a period of not less than five years preceding their deaths; to aid such members as are wholly or partially incapacitated by age or permanent bodily infirmities or who are disabled by severe illness or injury from practising for a period of six months; to aid in the education of the children of members thus incapacitated or temporarily disabled; and to assist any deserving case of necessity not included in the foregoing. All members joining before May 1st, 1905, will be considered as original members and will not need election. Further particulars can be obtained from the honorary secretary, Dr. L. A. Parry, 61, Church-road, Hove.

A SUGGESTION TO THE ROYAL COMMISSION ON TUBERCULOSIS.

WE have received the following communication which was addressed to the Royal Commission on Tuberculosis:—

A CONSUMPTION CURE.

It is likely that consumption might be cured by six weeks' open air treatment (instead of six months') by the judicious use of fern root and pomgranate bark in combination with lavender and a little hypophosphates (or Easton syrup). Possibly lavender and fern would be sufficient. Lavender seems a healing ammonia. I had some of the tubercle bacilli about the heart and I drove them out with the above substances. The fern-root decoction was the stuff I used in largest quantities, then pomgranates, then lavender, and lastly the triple phosphates. Koch's germ cannot resist these combinations. I also rubbed a little golden ointment over the heart (℞ ung. hydr. nit. and sulphuris, a. a. ℥). I also kept my window open at night. At the time they were driven out I noticed one day in the dung what seemed a square inch of tissue like clear part of an egg seething with germs. I examined them with a strong ls. microscope but they were quite invisible. Possibly there was thousands of germs or more and thus made visible as a whole. I shall however try and find out which of the above is best or which two.

PRESBYTERIAN.

L.S.A. London.—We do not think that there will be any objection to the course of action which our correspondent proposes unless there are circumstances not mentioned in his communication. A place may fall naturally in the district of a brother practitioner without possessing a resident medical man. Our correspondent must to a great extent judge for himself as to the propriety of his conduct.

D. R. C.—"A Manual of Hygiene," by W. H. Hamer, M.D. Cantab., will probably supply the information which our correspondent requires. It was published by Messrs. J. & A. Churchill in 1902.

E. P. H.—If the master of a servant sends for a medical man to attend such a servant he, the master, is liable for the fees.

Pompey.—Our correspondent might apply to the Sister-in-charge, St. Saviour's Hospital, Osnaburgh-street, London, N.W.

M. F. F. will probably find the information which he desires by referring to our analytical columns.

F.R.C.S.—The question is a legal one but surely the order can be obtained.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.)

TUESDAY (22nd).—London (2 P.M.), St. ... Thomas's (3.30 P.M.), Guy's (1.30 P.M.), ... minster (2 P.M.), West London (2.30 ...), ... (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square ... (2 P.M.), Chelsea (2 P.M.), Central London ...

WEDNESDAY (23rd).—St. ... University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic ...), St. Mary's (2 P.M.), National Orthopædic (10 A. ...) (9.30 A.M. and 2.30 P.M.), Gt. ... Central (2.30 P.M.), Westminster ... London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (24th). ... St. Thomas's (3.30 P.M.), Univer... (3 P.M.), St. George's (1 P.M.), ...), Middlesex (1.30 P.M.), St. Mary's ... North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, ...

FR... ... (... P.M.), St. ... Charing ... St. Mary's ... King's College ... Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9. 30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (26th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1 30 P.M.), St. Thomas's (2 P.M.), University College (9 15 A.M.), Charing Cross (2 P.M.), St George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden square (9 30 A.M.), Guy's (1 30 P.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1 30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

[illegible] Chirurgical Society Discussion on Chloroform

[illegible] all, Blackfriars) —3 30 P.M. [illegible] r G. Sharp Strychnos [illegible] ie Motor Nerve Endings —

[illegible] culous Meningitis in whic[illegible] Puncture.—Mr B M Cor[illegible] tive Acute Local Tubercul[illegible] of Intussusceptions in Children.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (21st).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street, W.C.),—4 P.M. Dr. A. Whitfield Clinique (Skin.) 5.15 P.M. Mr. C. R. B. Keetley Plastic Surgery

POST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.),—5 P.M. Dr Ball Diseases of the Tonsils (with lantern slides).

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM (City road, E.C.)—2.30 P.M. Mr. F. Wallis Lecture-Demonstration on Diseases of the Rectum

NORTH EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.)—4 30 P.M. Mr. J. Cantlie Liver Abscess and its Treat-

[illegible] slides)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury, W.C.)—3 30 P.M. Dr. A. Turner Prognosis in Epilepsy

[illegible]

THE HOSPITAL FOR SICK CHILDREN (Gt Ormond street, W.C.)—4 P.M. Lecture:—Mr. S. Collier: Peritoneal Infection in Childhood

FRIDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. M. Yearsley: Clinique (Ear.)

POST GRADUATE COLLEGE (West London Hospital Hammersmith-road, W.)—5 P.M. Mr. Armour Injuries to the Spine and Spinal Cord.

[illegible] AND EPILEPTIC (Queen[illegible] r J Taylor. Ophthalmo[illegible]

[illegible] pital, N.)—4 30 P.M. [illegible] COLLEGE (Tottenham Hospital, N.)—4 30 P.M. Lecture —Mr P. Brooks Amblyopia, Congenital and Acquired.

EDITORIAL NOTICES.

IT is most important [illegible] to the Editorial business of [illegible] dressed exclusively "To THE [illegible]," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, should be addressed of

We [illegible]

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8 30 a.m. by Steward's Instruments)

THE LANCET Office, Nov. 17th, 1904.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radiation in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Nov 11	29 92	S W	0 39	82	59	48	51	52	Foggy
" 12	30 17	N W		76	56	47	48	48	Fine
" 13	30 45	S W		67	54	43	43	43	Foggy
" 14	30 55	E	..	55	52	38	40	40	Foggy
" 15	30 56	S E	.	62	55	39	41	41	Foggy
" 16	30 41	S W		73	52	39	42	43	Foggy
" 17	30 48	S E		47	46	42	46	47	Foggy

During the week marked copies of the following newspapers have been received:—*Eastern Morning News, Westminster Gazette, Sussex Daily News, Dublin Times, Birmingham Post, Surrey Advertiser, Notts Guardian, Dublin Express, Bradford Observer, Hereford Mercury, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, The Scotsman, St. Petersburg Medicinische Wochenschrift, Evening News, Yorkshire Post, Liverpool Mercury and Journal, &c.*

litters. It was noticed that the abdomen appeared to be somewhat distended after the casting of a litter. On that account and because this doe neglected or devoured its young it was killed within a week of the last littering. When the abdomen was opened five white discoidal bodies were found. None of the bodies showed any attachment to the abdominal organs or to the peritoneum; in all but the smallest sac the head, body, and limbs of a fœtus could be felt (Fig. 2). Dr. Pembrey then gives a careful and detailed account of the condition of the uterus and its horns; he found a scar on the front of the uterus just below the junction of the cornua. His conclusions are important, for he considers that the rupture occurred at least eight months before the examination of the doe, for in that interval it had four normal litters. From the size and development of the fœtuses in the sacs there is little doubt but they reached full term when the rupture took place. Sufficient explanation for the causation of the rupture is found in the fact that four fœtuses were inclosed in one sac, and he believes that it was the impaction of their bodies which caused obstruction to delivery and consequent rupture. The full description of the specimen is furnished by Dr. Pembrey and Mr. G. Bellingham Smith in the Transactions of the Obstetrical Society of London, vol. xlvi., p. 283, 1904, and the specimens are preserved in the museum of the Royal College of Surgeons of England.

Kamann has published an equally convincing case which also occurred in a rabbit.[1] This paper contains some very carefully done drawings illustrating the minute structure of the uterine wall in the situation of the scar. One of the fœtal sacs having become adherent to the omentum had dragged its stalk and undergone axial rotation, twisting its pedicle eight turns. Kamann, from a very careful investigation of his specimen, comes to the conclusion that it was a case of primary rupture of the uterus and that the embryos in their membranes were discharged into the abdomen and acquired an attachment to the omentum.

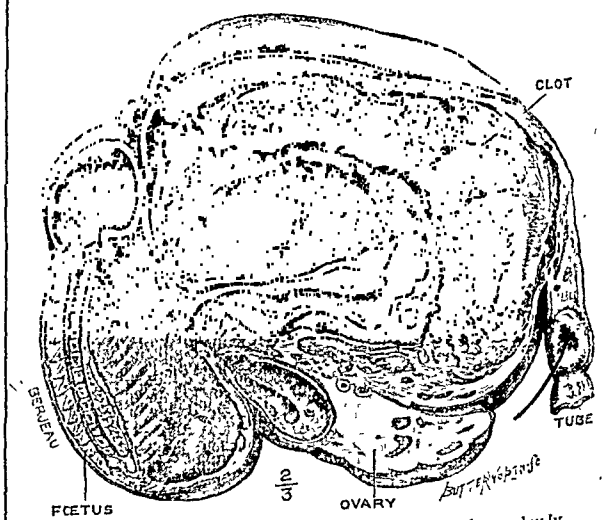
It is necessary to point out that when a fœtus in its membranes is discharged from the uterus into the general peritoneal cavity the amnion is a thin transparent glistening membrane, but the envelopes of these transplanted fœtuses are opaque, thick, and often tough. It has long been known that when foreign bodies gain entrance into the general peritoneal cavity they soon become covered with a fibrinous exudation formerly known as lymph, which quickly organises and not only forms an investment to the bodies but in many cases serves as a material which practically glues them to whatever viscus they may be in contact with. In the cases of the fœtal membranes it transforms them into a thick, tough, and opaque material.

It is curious to contrast the rabbit with the hare in relation to this accident. The rabbit has many young in a litter, 12, 14, or more. The hare has two or three at a birth and, unlike the rabbit, its young can see as soon as they are born. The hare is also liable to rupture of the uterus and the escape of the fœtuses into the abdomen, but its liability to this accident is less than that of rabbit, cat, or bitch; but a number of cases have been carefully recorded in which a gravid uterine cornu in the hare has undergone axial rotation, and in some instances the twisting of the cornu has led to its complete detachment. Cases of this kind have been recorded by Hutchinson, Dohrn, Klebs, and others. The references to the literature of these cases will be found in my book on the "Surgical Diseases of the Ovaries and Fallopian Tubes," second edition, 1896. Kamann has recently collected the German literature in an article in the *Monatssohrift für Geburtshülfe und Gynäkologie*, 1903, Band xvii., p. 588.

Gravid Fallopian tubes occasionally undergo axial rotation in women and carefully observed examples have been reported by Pozzi, Martin, and others. There are also reasons for believing that the same accident has occurred in connexion with cornual pregnancy. I am drawing your attention to these curious conditions in cats, rabbits, and other animals with the hope of proving to you that a similar process occurs in women, but with this difference, it is quite an exceptional thing for a fœtus to be extruded through a rent in the uterus into the pelvis or the abdomen and the patient to survive. As a matter of fact, Leopold's case, which has already been briefly quoted, is the only example that I know of in gynæcological literature. When pregnancy happens in the Fallopian tube the anatomical conditions of pregnancy in the long uterine cornua of the cat or rabbit are more nearly fulfilled, but be careful not to misread my meaning, for the Fallopian tubes of women and the long uterine cornua of the rabbit and cat are not homologous; the Fallopian tubes (oviducts) of these creatures will be found coiled up at the anterior extremity of each cornu. It has been abundantly demonstrated in the past 15 years that it is a very common event, especially in women who dwell in towns, for one or even both Fallopian tubes to become gravid, and I will give you some facts to prove that in some rare instances tubal fœtuses may be extruded into the general peritoneal cavity and be found in conditions similar to those of Dr. Pembrey's rabbits.

For nearly 20 years I have taken the deepest interest in the condition known as extra-uterine gestation and the gradual unravelling of the facts from the fancies with which they were entwined until some 25 years ago can be described as most engrossing. One of the most difficult questions to determine, and especially to silence what may be called the conscientious objector, was the mode in which fœtuses found their way from the tube into the abdomen. Professor J. W. Taylor has shown in a very careful piece of work how those tubal fœtuses which go to full term slowly expand and erode the tubal wall as they grow, until the amniotic sac emerges into the general peritoneal cavity. His explanation is accepted by those who have had opportunities of operating on examples of this form of tubal pregnancy, but in all the cases considered by him and in those published by others to support his opinions the fœtal sac has remained in relation with the Fallopian tube in which it originated. I will ask you to listen to the following story. In 1891 Dr. Mendes de Leon and Dr. Catherine van Tussenbroek of Amsterdam communicated to the British Gynæcological Society a paper dealing with a case of ectopic pregnancy. The patient was a pale, fragile-looking woman, the mother of six children. Knowing that she was again pregnant and having passed the time when she ought to be delivered she was much disturbed that the confinement had not happened. The patient furnished a very clear history and such an obvious and very moveable lump existed in the abdomen that a diagnosis of abdominal pregnancy was made and an operation was decided upon. Upon opening the abdomen a fœtus appeared lying loose in the abdomen save for some adhesions to the great omentum. The fœtus, which had advanced to about the sixth month of gestation, was tightly girt about with its amnion. A round swelling occupied the left half of the pelvis and pushed the uterus to the right. This was removed and a subsequent examination disclosed it to consist of the left Fallopion tube and the shrunken placenta. The authors of the paper entered very carefully into the consideration of the mode by which this fœtus reached the general peritoneal cavity without entailing the death of the mother and suggested the possibility that the fœtus might have been expelled through the ostium of the tube or have escaped

FIG. 3.



A gravid Fallopian tube in which the fœtus has been slowly extruded from the tube. Dr. Cullingworth's case. (Museum of St. Thomas's Hospital.)

1 Monatsschrift für Geburtshülfe und Gynäkologie, 1903, Band xvii., p. 588, Berlin.

through a breach in its walls Certainly this case is very exceptional among the records of extra uterine gestation in the fact that the fœtus was free from its pelvic attachments

The museum of St Thomas's Hospital contains a specimen which in some of its features is as remarkable as the foregoing In 1892 Dr C J Cullingworth exhibited at the Obstetrical Society of London a gravid Fallopian tube which he had removed from a bright, healthy, active woman, 32 years of age When the specimen was shown to the society it appeared so exceptional that it seemed expedient to submit it to a committee for special report I happened to be a member of that committee of investigation It will be seen on referring to Fig 3 that the specimen consisted of a gravid tube, and that the gestation sac appears constricted into two compartments, of which one contains the placenta infiltrated with blood clot and that the smaller cavity is occupied by a fœtus which is compressed against its periphery by blood clot The report concludes with this significant sentence "There is no proof that the tube has undergone rupture"

This specimen has puzzled me from the time I first saw it but it is interesting to us to night for it helps us to understand the case of Mendes de Leon because we have in it a fœtus arrested and killed in the act of extrusion from the tube It may be through a rupture in the walls of the gestation sac or it may be as some of us thought at the time when the report was formulated a fœtus in its amnion in the process of extrusion through the cœlomic ostium of the tube Oddly enough, whilst engaged in the preparation of this lecture a short note[2] was published stating that Pestalozza in operating on a woman for secondary abdominal pregnancy found the fœtus in the recto vaginal pouch, the placenta occupied the ampulla of the tube and the umbilical cord passed through the cœlomic ostium of the tube This is a very important observation and it helps us to believe, with the evidence afforded by the observations of Cullingworth and Mendes de Leon, that a fœtus may be extruded into the abdomen through an unclosed cœlomic ostium

That a fœtus may be extruded through an unclosed ostium is also proved by a case in Cullingworth's practice recorded by Fairbairn in which a fœtus was found in process of extrusion through the cœlomic ostium of a tube, the lower legs trunk and arms were hanging out but the head was too big to be ejected I submit that these observations are of very great value for the evidence previously available appeared to indicate that the discharge of a tubal mole into the pelvic cavity through an unclosed cœlomic ostium could only occur when it did not exceed the dimensions of a shelled walnut, but now we have to realise the probability that a fœtus advanced to the twelfth week of pregnancy may be slowly extruded through an unclosed ostium, an event as remarkable as it is unexpected

The great object however, which I had in view in collating the facts which form the basis of this lecture is to point out the valuable support they afford to the contention I have maintained for many years that primary abdominal pregnancy still remains an unverified speculation

[2] Policlinico Brit. Med Jour Sept 24th 1904

LITERARY INTELLIGENCE —The Scientific Press announces that it will shortly publish an elementary treatise on the Light Treatment for Nurses, by Dr James H Sequeira physician in charge of the Skin Department at the London Hospital —The University of London has made a new departure in the publishing concerning with the issue of the Calendar of a number of pamphlets dealing with each faculty Two pamphlets are published for each faculty one for external and the other for internal students They contain the rules and regulations for the several courses together with examination papers To some of the papers are appended explanations' These pamphlets will, we consider prove useful to those for whom they are future edition of the of Medicine the schools in some kind of order of their foundation for this would facilitate reference, especially on p 434 as regards the syllabus of Courses of Instruction' The arrangement in the pamphlet before us is as follows which is apparently constructed on no sort of plan —University King's St Bartholomew's, London Guy's, St Thomas's St George's Middlesex St Mary's, Charing Cross, Westminster, Royal Free

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ABSTRACT OF

A Clinical Lecture

ON

A CASE OF PERIPHERAL NERVE INTOXICATION

Delivered at the Bristol Royal Infirmary on Oct 22nd 1904

BY HENRY WALDO, M D ABERD, M R C P LOND,
PHYSICIAN TO THE INFIRMARY

GENTLEMEN —The patient a young man of good physique and pale complexion aged 33 years, married, a clerk and on night duty for nine months in the year was admitted to the Bristol Royal Infirmary on August 31st 1904 four days after the onset of illness His habitual health was good until 12 months ago and he had not been the subject of any former ill health The attack began with retching and severe pains in the legs which lasted all one night He said that the medical attendant thought it was rheumatism On the following night the pains in the legs were still more intense and on the following morning one knee gave way and within the next 24 hours there was total loss of power in both legs and slightly so in the arms He pains then left him with only tenderness in the legs and at the tips of his fingers A catheter had to be passed twice a day for ten or 12 days

We have here a case of paralysis which I must remind you is only a symptom of the disease The brunt of the attack falls upon the motor the sensory, or the vaso motor nerves The acute stage in this patient only extended over a few days with rather sharp pains in the legs and culminated in complete loss of power in them The other initial symptoms were not very acute and constitutional disturbances were almost absent, excepting that there was retention of urine for a few days The arms are only slightly affected These cases are usually ushered in with severe symptoms and may resemble an acute infectious disease and be mistaken by any of us for rheumatic fever This symmetrical palsy can scarcely be owing to a central lesion is there has been an absence of cerebral disturbance The loss of power and the presence of pain and tenderness in the legs (the least pressure on the calf muscles caused intense pain) point to a peripheral cause and with the history of the abuse of alcohol this alone may be considered a sufficient reason for looking upon this case as one of peripheral neuritis But what is called peripheral neuritis may be brought about by many other factors as for example the diphtheria poison or the absorption of lead into the system or as a sequel of diabetes or enteric fever or influenza and last but not least the swallowing of cause occurred at 1901 by Dr E S Reynolds in the beer consumed by these patients to the extent of half a grain to the gallon[1] Dr Reynolds considered the arsenic and not the beer was responsible in most if not in all the cases in what had formerly been looked upon as the alcoholic type of peripheral neuritis And this view was accepted in by many others who pointed to the enormous consumption of alcohol and the rarity of peripheral neuritis and also that the treatment of many cases of chronic over long periods by arsenic resulted in paralysis of the limbs Sir William Gowers[2] drew attention to the fact that the trouble does not more often follow the prolonged use of Fowler's solution in combination with bromides in epilepsy There have been many well authenticated cases of peripheral neuritis recorded in which no cause could be discovered Chronic constipation has even been suspected as the origin There can be no doubt that exposure to cold having sat in wet clothes shortly before the attack It seems to be admitted that the effect of beer and arsenic in combination is a very fertile cause of this condition In our

[1] See THE LANCET Jan 19th 1901 p 108
[2] Transactions of the Royal Medical and Chirurgical Society vol lxxxiv

patient here there is little doubt that alcohol alone (beer and spirits) was the chief cause.

I have called this case one of nerve intoxication rather than inflammation arising from the toxic effects of alcohol. Saundby thinks the tenderness over nerve trunks affords clinical support to the theory of inflammation. Hamilton would prefer to call it a degeneration due to the action of a poison resembling that of phosphorus upon other tissues. I do not think we are justified in concluding that inflammation or degeneration is present. The electrical reactions in this case are not those of degeneration, there being no response to either faradism or voltaism. The extensor muscles (anterior tibial and musculo spiral group) are most affected by these toxins and it is difficult to explain the reason excepting in the knowledge that they are much weaker than the flexor muscles. And, again, the terminal portions of the nerves are nearly always first and most profoundly affected, the reason of this being that their peripheral ramifications cover a much larger area than they do when collected into bundles and so are more exposed to the poison circulating in the capillaries. And then they are farthest removed from the nerve cells upon which their very life depends. I may say in passing that females are much more liable to become the victims of this form of paralysis than men. I will now touch upon some of the more prominent signs and symptoms. Of the deep reflexes the knee-jerks and arm-jerks are totally absent, but you may conclude that they will return when the patient recovers. This is just the opposite to their behaviour in tabes dorsalis, where they are lost for all time. Some years ago Ross pointed out that the knee-jerks were often exaggerated in the very early stage of peripheral neuritis, but it is seldom one sees these patients at that period of the disease. The superficial reflexes are absent in this case, which is rather unusual. The amount of pain and tenderness varies a good deal in different cases, but the sensitiveness of the calf muscles is nearly always well-marked; it is said to be present in a high degree when depending upon arsenic. Ankle-drop is well illustrated in this patient and you notice that the toes are curved into the soles of the feet. When the loss of power is less profound ataxic symptoms may be present, the patient cannot raise his toes, and they are liable to catch in the floor when he tries to walk. Wrist-drop is more to be seen in lead poisoning and in these cases the sensory nerves escape, the palsy being limited to motion. The muscles, especially in the legs, are soft and flaccid and waste rapidly. When the arms are affected from the effect of alcohol the thenar and interossei may also participate in the wasting. The supinator longus is usually affected in alcohol poisoning, but there are exceptions to this. You are aware that it escapes in plumbism and serves as a means of differential diagnosis. The sphincters defy these toxins in peripheral paralysis and so do the trophic nerves—one scarcely ever sees bedsores in connexion with these cases. Glossy skin in patches is sometimes present. Formication and other paræsthesiæ are seldom absent and painful cramps which interfere with sleep are not uncommon. If the facial muscles are involved the patient is quite expressionless. You will notice that there is a tendency to nystagmus in this man, but to obtain it you must tire out the recti muscle for some minutes. Gowers has often seen nystagmus in association with his cases, but the majority of writers consider it a rare occurrence. I have seen it stated that mental failure attended with delusions and even extravagant ideas resembling general paralysis of the insane may attend these cases and loss of memory is frequent. It is extremely seldom that the vital centres become affected although the late Dr. W. Miller Ord said that he had seen the vagus attacked, giving rise to marked and even fatal cardiac disturbance. The legs are so extremely paralysed in this patient that one begins to fear that the mischief may have ascended to the spinal cord and invaded the anterior cornual cells, but there is at present an absence of all the signs indicating a cord lesion, but at the same time such a powerful authority as Gowers thinks that a neuritis limited at first to a peripheral nerve may extend upwards and involve the larger nerve trunks, or even reach the spinal cord, causing subacute myelitis. And Dr. J. A. Ormerod says that it is extremely probable that peripheral neuritis is often associated with lesions of the nerve centres. I must confess that I know of no means of making a differential diagnosis with any certainty between anterior poliomyelitis and severe peripheral neuritis. All we can do is to wait patiently, often over months of time, in the hope that the large motor cells in the cord have escaped. The muscles in this man's legs are not so very much wasted, and on that account I am disposed to take a favourable view. I have sometimes thought that the action of the diaphragm has been interfered with in association with these cases, but it is a very difficult thing to satisfy oneself upon. The temperature in this patient has been very little above normal and I see that Dr. P. H. Pye-Smith noticed that pyrexia was only occasionally present.

From experience we know that the prognosis in peripheral nerve intoxication is extremely favourable in the vast majority of cases, but to arrive at this conclusion in any particular patient you must take into consideration the state of his abdominal and other organs. The prolonged effect of alcc [illegible] its baneful influence on the liver and the [illegible] derangement of this gland are often obscure and may be easily overlooked. However, as far as I am able to judge, this man's liver is healthy. Up to quite recently medical authorities have not considered that alcohol does much damage to the kidneys, but the pendulum seems to be swinging in the opposite direction, and this view is somewhat borne out by the history of this case, for there was a cloud of albumin in his urine each day for four weeks after admission, but it has now disappeared and the urine is healthy. As far as we are aware he has consumed no alcohol of any kind since he has been in the infirmary. And with the rest and equable warmth of bed he has been under the best conditions for allaying the nephritis which was beginning to damage his kidneys, the origin of which, there can be no reasonable doubt, was the effect of alcohol. In giving a prognosis I should be guided by the persistent presence or absence of albumin in the urine almost more than any one other sign. There is nothing in the chest here to influence one unfavourably and so I can advise you to give a good prognosis and there is every ground for thinking that this patient will make a complete recovery. Almost the only cases of peripheral neuritis *per se* which do not regain power in the limbs are those in which lead is the materies morbi, and when you see well-marked wrist-drop from this cause which has been long neglected you will do wisely to [illegible] prognosis. You must also be cautious in [illegible] n the palsy depends upon the diphtheria toxin, for in these the heart may dilate rather suddenly and unexpectedly and account for alarming symptoms (toxic myocarditis).

With regard to treatment, all are agreed that the one all-important factor in treatment is rest in bed. If the pains are severe enough to prevent sleep it may be necessary to give morphine but before doing so the effect of hot water fomentations, which sometimes relieve the pain and tenderness, should be tried. When the more acute symptoms have passed off a daily warm bath is to be recommended. If the tenderness is not excessive massage gently done should be practised. To prevent the muscular substance from degenerating we are using slow interruptions of the constant current battery. There was no response to this for some time but now there are slight contractions. This current, as you know, acts directly upon muscular tissue. When you can get reaction to an induced (faradic) current, which acts indirectly through the medium of a nerve twig, it will be better to employ that. I have withheld the injection of strychnine into the muscles as the patient has been improving, although very slowly, and still have this in reserve. It should not be used during the acute stage of the illness. I would advise you to avoid arsenic in the treatment of these cases.

PRESENTATION TO A MEDICAL PRACTITIONER.—The President, officers, and members of the Sheriff Hutton Free Gift Society on Nov. 25th presented Dr. Gramshaw of York, on his resignation of the office of surgeon, with a silver salver bearing the following inscription:—"Presented to F. Sidney Gramshaw, M.D., F.R.C.S. Edin., as a token of respect and esteem for nearly 30 years' faithful service."

DEATHS OF CENTENARIANS.—The *Times* of Dec. 2nd states that Mrs. Mary Ann Gibbins died on Nov. 29th at Huyton, near Liverpool, in her 104th year. About 12 months ago she sent to the Queen a beautiful piece of needlework which she had executed and received a gracious letter of acknowledgment from Her Majesty.—On Nov. 30th Mr. Richard Philbin died in Liverpool, aged 107 years.

DISEASES OF THE NERVOUS SYSTEM SOMETIMES REGARDED AS FUNCTIONAL, WITH PARTICULAR REFERENCE TO DIABETES

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IN regard to many regions of pathology notwithstanding the light which bacteriology has thrown upon some disorders and the suspicion it has cast upon others we cannot but recognise that there are still diseases and groups of diseases with regard to which what we know is as nothing compared to what we hope to know What with improved instruments and new methods we know not what a day may bring forth The last hundred years have taught us more of the processes of disease than all preceding time As time passes the pace quickens We know not what view is about to open upon us or what knowledge awaits us It is probable that no branch of knowledge which relates to this earth has made greater progress within living memory than that which has to do with the nature of disease though I fear that the arts of prevention and cure have not made corresponding advances This is inevitable Science must come before the application of it not that science is everything Much has hitherto been done empirically not without antipathy to medicine and humanity now science is asserting itself and promises to provide our chief line of march in the time to come We are learning something of Nature's ways if only of doing harm *Disce est ab hoste doceri* In learning how Nature propagates disease we may find out how to obviate it We may confidently presume that the future will let light into many dark places and show to us what we know not what there is nothing to be expected with more confidence than the unexpected Let us keep our eyes and minds open and not be too sure when we see nothing that there is nothing to be seen 'Do you see nothing there?' Nothing Yet all that is I see But the ghost was there all the time Let us not be too ready with the word *functional* though it has its uses it sometimes displays our knowledge and more often conceals our ignorance

The more simple or the more mechanical is the action of any organ the more it comes within our limited comprehension In the heart, for example whatever else may have to do with it we can admire and partly understand a masterpiece of hydraulic machinery and if it goes wrong we can generally find out how The lesions are for the most part obvious and the results traceable So with other organs say the lungs and kidneys, with symptoms of pneumonia we have the recognizable organic changes which underlie them, with renal dropsy we discern renal changes The connexion between structure and function is as inseparable as between cause and effect and if we sometimes see the effect without the cause we do not doubt that the

e ghosceere causas It is left to the pathologist of the future to go behind the veil and to discern the real *causa causarum* of disorders which however well defined clinically are not so pathologically and of which we are fain to confess that what we see is only enough to suggest that there is more to be seen

Of all the diseases to which flesh is heir those of the nervous system are the most obscure in their pathology We know [illegible] nfess that too often [illegible] ndefinite and incomplete [illegible] accomplished we m[illegible] paralysis as if what was essential was the effect and not the cause It is of comparatively recent years that the disorder has been traced to inflammatory hæmorrhagic and degenerative lesions in the cord We know of these but we do not yet know all about them nor how they came to be where they are But we know something and have got to a lesion which explains the symptoms Hydrophobia from time immemorial has been associated with a specific poison Now we have done as much and more for tetanus for we have isolated the materies morbi But with regard to both we still have much to learn, for we are ignorant of the manner in which the poison acts on the nervous system so as to bring about the symptoms If with tetanus we find distinct and even conspicuous hæmorrhage in the cord even to the extent of lacerating its substance, yet since this is not found always it may be regarded as only collateral as accidental rather than essential but at any rate it is evidence of a morbid hyperæmia which plays a part though only a secondary part in the disease But at least we have got to something which promises more

Of chorea much may be said which applies to tetanus, though there is this difference—one is always produced by a specific poison the other only sometimes In chorea the evidence of disturbed vascularity is as great as in tetanus and of the same kind We see in both evidences and results of hyperæmia in corpuscular extrusions effusions of liquor sanguinis and extravasations of blood in bulk and entirety Among the more striking of these hyperæmic processes is the dilatation of the central canal of the cord presumably due to exudation within it seen in chorea and diabetes, though not constantly in either To speak for the present only of chorea and tetanus it is clear that we do not see all but we see enough to assure us that the nervous centres or some of them are abnormal and concerned in the symptoms which are manifested through the nervous system It is obvious that we do not see all or do not take all in for if two cords were presented to us one of tetanus the other of chorea so imperfect is our present knowledge that we could not say which was which or distinguish between the hyperæmia of one and the other In both the congestion is distinctly morbid the physiological has given place to the pathological, which is declaredly morbid injection of the vessels and extrusion of their contents the one constant the other occasional, but we are well aware that underneath these superficial, if obtrusive signs there is something else which constitutes the disease and determines the symptoms In tetanus we have been made aware of a bacterial poison which especially affects the cord with hydrophobia we cannot doubt that something of the kind at least [illegible] yed brings its influence to bea[illegible] as we have a material poison [illegible] disease does not present itself to our imagination we have to do with an obvious materies morbi which is sufficiently satisfying in a pathological sense

So far as we can judge from tetanus and chorea—as to hydrophobia I have had no opportunities of observation—the organic changes appear to be always of the same kind comprising the various consequences of hyperæmia overloading of the vessels extrusion of liquor sanguinis and in extreme case breaking up of the substance of the cord by what may be termed explosive hæmorrhage Having regard to the interest and importance of the material changes which accompany diseases which have been called functional I venture to draw attention to illustrations which I contributed many years ago to the Transactions of the Royal Medical and Chirurgical Society and to Holmes's System of Surgery[1] These represent sections of the cord from a case of traumatic tetanus showing extensive laceration of the central grey matter and occupation of the rent with blood and liquor sanguinis displaying an injury which is no more functional than an apoplectic clot of the size of a goose's egg deserves to be so called Tetanus used to be thought a functional disease or one without a pathology, it is so no longer I advert to what is obvious only to point out a parity of argument and a similarity of lesion between tetanus demonstrably an organic disease and chorea which is still regarded by some as functional though putting aside the tetanic microbes there is as much visible evidence in chorea as in tetanus that the cord is in an unnatural condition and unnatural in the same way I may appeal to a drawing published by the Royal Medical and Chirurgical Society[2] which represents an apoplectic extravasation in chorea which may be fairly compared with that in tetanus and is presumably of a similar origin

Chorea like tetanus is a disease of the nervous system of

[1] Holmes [illegible] 406 See also Transactions [illegible] vol II, [illegible] vol lix, plate iii

[2] Transactions [illegible]

which the lesions, putting aside those of the heart, are chiefly displayed in the spinal cord and that by way of hyperæmia and its consequences. As in tetanus the degree of hyperæmia is various, it may even attain to "apoplectic" extravasation and present itself conspicuously to the naked eye within the substance of the grey matter. Other resulla of hyperæmia are sometimes found in the effusion into the fissures of liquor sanguinis and in dilatation of the centrts canal no doubt by a similar exudation. These and lesser signs are evidences of a morbid attitude of the blood-vessels, presumably of the arteries, which we hypothetically attribute to their vaso-motor nerves. We know that we do not see all but at least we see that in our estimate of the morbid process which constitutes chorea hyperæmia, exudation, and hæmorrhage are to be reckoned with. At what bidding the nerves thus misconduct themselves we know not or know only partially. Fright and rheumatism are apparent in this relation but how they are connected with what seems to be a local vaso-motor paralysis we know not.

It may be maintained with much show of reason that there is no such thing as a functional disease if by this we mean abnormal action with normal structure and normal influences from without. There must be a reason for the wrongdoing and if there is none in the surroundings or circumstances it must be in the organ itself. There may be, and no doubt are, disorders of which we do not know, and perhaps may never know, the essential cause, whether intrinsic or extrinsic, or if intrinsic of what nature, but the mills of God grind exceeding small and there is much in nature, sound or sickly, which is not to be reached by the coarse vision and clumsy methods of the twentieth century. Organic changes are not necessarily obvious. Some presumably exist and produce their effects which elude our observation. There may be changes in nutrition by way of shortcoming or overplus which, though little exposed to view, may be prodigal in results, particularly in the nervous system. Such changes may be none the less organic because they are inconspicuous. There may be diseases of which we have not discovered the pathology, but the disease does not exist which has none. If the machine goes wrong and the surroundings are right we must look to the works. The morbid anatomy may be too minute, or in some way too elusive, for our senses or instruments, and yet be there. There is something not only unsatisfying but repugnant to our intelligence in supposing that a disease like chorea, which will go on in spite of every change of circumstances until it wears the skin off the joints, the flesh off the bones, and the life out of the body, should depend on nothing more enduring than an unreasonable and unaccountable caprice on the part of the nervous system as if it were actuated by simple malevolence, for it does wrong when it is structurally capable of doing right; or that diabetes, which will persist unto death in subverting the vital processes of nutrition, should be due to no change in the organs or structures which misconduct themselves so fatally, but be purely functional, the organs or structures on this hypothesis being as capable as ever of doing the right thing but doing the wrong by preference or perversity.

We may provisionally apply the term "functional" to disorders of a temporary sort which have not yet displayed their morbid anatomy, however we may suspect that there is something behind which is unknown to us. The term is less irrationally applied to passing than to persistent disturbances and is most obviously out of place when it is attached to such as persist unto death and produce it. Hysteria, delirium, and epilepsy may be called functional with less improbability than chorea, insanity, and diabetes.

An able writer,[3] one unhappily no longer with us, one of great literary gift and considerable clinical acuteness, wrote a book of which the chief purpose was to show that chorea was a *functional* disease—a disease without a pathology, disturbance of action unattended with change of structure. But it has been shown that though we may not have got to the *fons et origo*, the prime instigator or essential morbid change with which chorea is always present, and without which chorea is always absent, yet we see enough to assure us that the relation of the blood-vessels to the cord is unnatural and always in the same way, that of hyperæmia, a constancy of morbid action which must be taken into account in any hypothesis by which we may seek to combine the facts of the disease.

[3] On Chorea, by Octavius Sturges, second edition.

Dr. Sturges[4] asks whether chorea "may not be looked upon as a functional disorder, a motor disturbance which is as much beyond the reach of anatomical demonstration as are the various passions and motions which like it distort and coerce the body in a variety of ways." To this I say, *No*. Much beyond our reach there may be but not everything. Morbid changes are found in abundance though it is probable that there are others which we have not found. Those which we have found are all of the same nature—hyperæmia and its consequences. In his determination to see nothing but what is functional, nothing but what is invisible, Dr. Sturges recognises nothing in the way of morbid anatomy as having to do with chorea. Though the characteristic symptoms of the disease have concurred with an appropriate lesion of the cord which but for the chorea assuredly would not have been there: he would say that such an one died not *of* chorea but *with* it.[5] He happened to be having chorea when he died but the chorea had no more to do with his death than Tenterden Steeple with Goodwin Sands.[6] I had put together some facts of morbid anatomy collected from the post-mortem examination of seven cases of chorea in which various phases of injection and extravasation were as evident in the cord as had been nervous symptoms apparently of spinal origin evident during life. I had somewhat loosely reverted to these as "fatal cases of chorea. Dr. Sturges takes exception to the phrase "fatal cases *of* chorea" and prefers to describe them as "fatal cases *with* chorea," as if the chorea and the fatality were quite disconnected. This criticism, however, has at best but a limited application. No doubt chorea is intimately associated with valvular disease of the heart; where the two concur the latter may be the chief cause of death, in which case it may be said without impropriety that the patient did not die *of* chorea but *with* it. But what shall we say when, as in four of my seven cases, the chorea was the leading disorder and the obvious cause of death! And what shall we say to the hyperæmia of the cord, leading in one case to a bulky extravasation, if chorea is purely functional, an immaterial essence which holds no communication with anything so gross as morbid anatomy?

Where physiology ends pathology begins. In health the movements of the voluntary muscles are voluntary; those of chorea are involuntary. As the involuntary supersedes the voluntary we may suppose that the normal state of the nervous system is superseded by the abnormal. And do we not find abnormity enough to suggest that things are substantially wrong? Are extravasations of blood and liquor sanguinis and dilatation of the central canal to be wholly disregarded? It is true that the lesions are inconstant and miscellaneous, but they are all results of the same condition—hyperæmia.[7] In one of the seven cases which furnished me with post-mortem examinations a clot one-twelfth of an inch long had torn its way into one of the cervical horns; in another the central canal was greatly dilated, in one part containing blood, in another apparently empty; a third case, that of an old woman, presented, as a picturesque object under the action of carmine, an extravasation of liquor sanguinis in the anterior fissure and others in connexion with the posterior horns. I have made no mention of less striking, but not less significant, extravasations in the subarachnoid space and elsewhere and have scrupulously omitted all appearances of doubtful interpretation, but enough remain to form a curious illustration of functional disease. There is a resemblance, not to be overlooked, to what is found in tetanus.[8] In each we have a morbid change of which injection is the outward and visible sign. In tetanus we have the parasite behind; in chorea we have behind something as yet unknown.

We have a superficial knowledge that certain mental impressions, above all fright, and certain conditions of disease, notably rheumatism and scarlet fever, may give rise to chorea; of the process we know nothing more than that it is attended with a morbid fulness of vessels which we hypothetically attribute to a paralysing or relaxing influence brought to bear upon them. This is not all but it is something. We are conscious that there is more behind. But

[4] Chorea, second edition, p. 115.

[5] Loc. cit., p. 88.

[6] The Pathology of Chorea, by W. H. Dickinson, Transactions of the Royal Medical and Chirurgical Society, vol. lix., 1876.

[7] Transactions of the Royal Medical and Chirurgical Society, vol. lx., plate iii., fig. 1.

[8] Ibid., vol. li., plate xii., fig. 1.

what we see is something material and is enough to remove chorea from the unsatisfying category of functional diseases It is true so imperfect is our knowledge, that what we see does not distinguish chorea from some other diseases of nervous origin but in this and others we see material evidence of morbid action Evanescent or temporary disturbances may be due to evanescent or temporary influences as a spasm of the larynx may be produced by a blast of cold air or a passing diarrhœa by a laxatus senna, but where the disorder is permanent or enduring we must look for a cause which is equally persistent A fright which lasts a minute may cause chorea which lasts for months Is it not probable—indeed, is it not certain—that the fleeting first cause leaves behind it a lesion which is not so? The substantial disturbances of the spinal cord in tetanus and chorea are uniform in kind though they present considerable variety in place and degree, in tetanus we cannot doubt that they are the secondary results of a parasitic intrusion in chorea we recognise, as in tetanus a morbid hyperæmia which appears to be rather a secondary or collateral consequence of the disease than the *primum mobile*, nevertheless it is something and it is there and proves beyond doubt or cavil that the cord is materially involved Similarly in diabetes though we have not discovered the initial change we see sufficient signs of morbid action in the cerebro spinal centres to indicate that they play a part in the disease The extravasations which have been found are not large enough or constant enough to account for the diabetic process but they suggest an attitude of the vessels which may have something to do with it These pathological indications, slight though they be, which connect the brain with glycosuria are the more significant when taken together with much that was previously known the production of glycosuria in animals by puncture of the medulla and in man by wounds and injuries affecting the same part of the brain, and the occurrence of diabetes in consequence of mental emotion in the shape of grief, terror or anxiety

The temporary exaggeration of diabetic diuresis under mental perturbation is not an unfamiliar experience In illustration of the same association I may call attention to an observation which has recently been made known—namely, that engine drivers whether in England or America, are especially liable to diabetes—a liability to be attributed we may presume, to the anxious nature of their calling This proclivity, which appears to have been first pointed out by Dr A H Smith of New York has been further illustrated by Mr Herbert W Page,[8] surgeon to the London and North Western Railway, who tells us that the drivers on this railway present a mortality from diabetes which is nearly twice that of the ordinary population So many independent lines of experiment and observation, pathological and clinical point in the same direction that if the brain have not to do with glycosuria Nature and Art have combined to deceive us

In view of the many indications of a connexion between the exalted organ and the humole secretion it occurred to me now many years ago to inquire whether glycosuria presented any clinical association with insanity If insanity be a disease of the brain and glycosuria as with Bernard's rabbits a result of cerebral irritation the two should sometimes concur I was allowed to make the inquiry at Bethlem Hospital and obtained a reply in the affirmative so far as related to a small proportion of the lunatics which were put to the question and sugar in small quantities There was no instance of fully developed diabetes in the cases to which I refer, but traces of sugar were found, so far as the reduction of copper could be taken as a test such as to point to a connexion between insanity and glycosuria Copper as is well known may be reduced by ingredients of the urine other than sugar, though not to the same extent or quite in the same manner, the darkening of the urine with liquor potassæ and heat must be well marked to be conclusive but for practical purposes the two tests taken together or the copper by itself if the response be characteristic may be trusted until assurance doubly sure is afforded by fermen

[illegible] reduction among which were three in which it was considerable The indications afforded by Fehling's test were generally confirmed by the action of liquor potassæ The emphatic response to these tests in some cases was decided evidence of sugar, in others the reply was less conclusive and perhaps in some inconclusive, but the occasional presence of sugar in the urine of the insane appeared to be beyond doubt Further observations were needed to show how often and whether in one sort of mental disease more than another

I am glad to be able to appeal to the later and larger experience of Dr C Hubert Bond at the London County Asylum whose tests included that of fermentation Dr Bond places before us 32 cases of glycosuria or diabetes associated with insanity He shows that of 355 recent cases admitted into the Banstead Asylum 19, or 5 32 per cent displayed sugar in the urine on admission It is to be noted that patients with melancholia were especially subject to this complication 114 cases giving 11 of glycosuria or about 10 per cent Dr Bond draws attention to an observation of Dr H Maudsley's that diabetes often shows itself in families in which insanity prevails and that the two diseases are certainly found to run side by side or alternately with one another more often than can be accounted for by accidental coincidence or sequence Other observations have been made which bear witness that a certain, if a small proportion of lunatics present the urinary change in question Mr R R Leeper[11] describes three cases of melancholia in which the urine contained sugar, in two the glycosuria ceased with the melancholia, in the third the melancholia outlasted it Dr Fauil Raimon[12] tells us that of 114 patients in various forms of idiocy and mental disease putting aside two diabetics who were among the number 14 showed some degree of glycosuria Dr Raimon attributes this condition in these circumstances to a failure in the power of assimilating sugar which serves to emphasise the fact though scarcely to explain it Dr W R Dawson describes in some detail[13] seven cases of glycosuria associated with insanity which had come under his notice during the 15 months ending Jan 1st 1902 He distinguishes two classes, one in which morbid mental phenomena have arisen in the course of glycosuria the other in which glycosuria developed during an attack of mental disease the former class being rare the latter fairly common Of the former class he gives only one instance

were of melancholia

admission of Dr W Ha[illegible]

at Bethlem with critical intent but has furnished testimony to a certain extent supporting them which is valuable as that of an adversary He admits that in 49 lunatics in this institution he found slight cupric reduction in five and undoubted sugar in two In view of this admission it is of interest to note a later statement which appears to be scarcely consistent with it "About 20 years ago says Dr Hale White[14] when the nerve theory of diabetes was in the ascendant, it was urged in support of it that the urine of lunatics frequently contained sugar Dr G H Savage and I showed that this was not so The unqualified negative is misleading 'Bate me an ace quoth Bolton Did the urine *never* display sugar or only *not frequently*' If not frequently implies sometimes myself and my critics are of one accord The language needs more finish I would suggest as an improvement that instead of saying absolutely as if there were no truth in it Dr Savage and I showed that this was not so the phrase should run, Dr Savage and I showed that this was so in so far as among the patients in Bethlem we found undoubted sugar in over 4 per cent and suspicion of it in over 10 per cent

The questions that remain are no longer whether sugar is to be found in a tangible proportion of lunatics but in what kinds of lunacy and in what proportions Dr Bond's researches do something towards these ends As sugar in appreciable quantity is no ingredient of the urine in health we must look for morbid associations wherever we find it For academic completeness we should know how often sugar is to be found in the average sane person belonging to the class by which Bethlem and Banstead are supplied Among a large number of persons in apparent health there must be a small number who have upon them

[illegible] Page Quoted by Dr Saundby [illegible] ons vol I Diabetes p 62

[11] Journal of Mental Science October 1901 p 763
[12] Brit Med Journ Epitome Nov 9th 1901 p 73
[13] Glycosuria and Insanity by W R Dawson M D Medical Press and Circular Jan 1st 1902.
[14] THE LANCET March 14th 1903 p 715

the glycosuric beginnings of diabetes. How many or how few these may be we do not know accurately—certainly nothing like 5 per cent., which, speaking roughly, is Dr. Bond's estimate of the glycosuric coefficient of Banstead comprehensively, or 10 per cent., which is his estimate for melancholics. Dr. Bond's figures do something towards supplying a standard of comparison for themselves, for while 82 maniacs give no instance of glycosuria 114 melancholics gave 11. If this difference should prove the rule glycosuria must have some morbid relationship with melancholia which it has not with mania. It is not necessary to suppose that insanity directly causes glycosuria or glycosuria insanity, but that the morbid condition of brain which accompanies some forms of insanity is capable of instigating glycosuria.

I will not presume to say whether or not "the nervous theory of diabetes is still in the ascendant," but, supported as it is by so many converging lines of evidence, it is difficult to suppose that there is not something in it. If there be not there is much to explain and to explain away.

While upon the clinical associations of diabetes which relate to the nervous system some may be mentioned, though they are equivocal in their bearing, since they may either be connected with this disease in its origin or acquired in its course, possibly as consequences of the action of the morbid blood upon the nervous structures. The loss of the patellar reflex is common in diabetes and I judge it to be usually an early symptom, as if belonging to the disease in its beginning rather than acquired in its course. I have even known the loss of this reflex to have been noticed before any other sign of the disease had come under observation. Whether this loss is a result of the attendant changes in the blood or a part of the presumed initial modifications in the nervous system must remain to be seen. A less common nervous failure and one of later production is superficial impairment of sensation especially affecting the lower limbs. I mention this by the way, though it contributes nothing to the nervous origin of diabetes, for like the loss of the patellar reflex it may be *post hoc*; not therefore to found either upon the loss of reflex or of sensation, we must nevertheless recognise and duly appreciate certain post-mortem changes which are more significant or less equivocal.

Coming now to pathological observation, in other words to the post-mortem condition of the brain and cord, we see so nothing, but what is most evident to us is that we do not see all. As with tetanus and chorea, we find results of a morbid relation between the blood-vessels and their surroundings which, however interpreted, do not admit of dispute. For the most part these are hæmorrhagic or exudatory, they have obviously taken place during life, and they indicate an abnormal condition of the vessels which allows their contents to transpire. These have been sufficiently described and represented[15] and need no recapitulation here unless it be to dissociate ante-mortem and vital changes from some which are cadaveric. In the early days of neuropathology sufficient allowance was not made for the instability of nervous structure and certain changes, to one of which the term "miliary sclerosis" was given, were thought to have taken place during life instead of, as they had done, after death, but speaking only of what are obviously the results of vital action we find in connexion with diabetes perivascular hæmorrhages, not by rupture but exudation, enlargement of the perivascular spaces giving in section and in parts a cribriform appearance, and a dilatation of the central canal of the cord to which the name "syringomyelia" has been given.[16] Abnormal these changes certainly are, but none of them are peculiar to diabetes, nor with diabetes are they constant in place or degree. As with tetanus and chorea they mainly indicate hyperæmia. But there must be something behind: with tetanus it is a bacillus; what with chorea and diabetes we know not, but at any rate in both a distinctly morbid hyperæmia forms part of the process.

As taking part in the disturbed physiology of diabetes and presenting an unnatural pose as regards its blood-vessels, though the changes hardly come within the scope of morbid anatomy, the liver claims especial mention. It has long been known that this organ in this disease presents various signs of congestion. Prout mentions engorgement of the portal veins, congestive enlargement, and jaundice; and other writers adduce other particulars to the same purpose. Examined minutely in section, after hardening, the repletion of the vessels, both venous and arterial, is manifest. The arteries are often seen to be full of blood as well as the veins—in health, as is scarcely necessary to observe, the arteries after death are empty. Thus, not to insist on more than can be easily demonstrated, we find evidence of arterial debility, of the nature of, if not amounting to, vaso-motor paralysis, in the brain and in the liver; whether more general I cannot say, but it is evident that the face in certain stages and degrees of diabetes displays a dusky-red congestion which is not characteristically venous in its colour and is suggestive of vascular collapse. In the brain we see evidence of a similar vascular pose in the hæmorrhages by transudation to which attention has been drawn, and in the cord a suggestion of it by the exudation which in a tangible minority of cases occurs within and dilates the central canal. In the liver we see engorgement, presumably the result of a similar condition of vascular ineptitude.

The vaso-motor paresis, or nervous debility, as it may be called, which on grounds of post-mortem observation I have attributed to the cerebro-spinal system and to the liver, has been inferred by Dr. F. W. Pavy, as far as the liver is concerned, on grounds unconnected with morbid anatomy. Dr. Pavy strictly limits his theory to the chylo-poietic viscera and to one form of diabetes. Different lines of inquiry may lead to similar results, as must necessarily be the case if there is any truth in the conclusion. Says Dr. Pavy,[17] "a vaso-motor paralysis implicating only the vessels of the chylo-poietic viscera may stand at the foundation of the form of diabetes limited to the defective assimilation of the ingested carbohydrate." My observations are less restricted than Dr. Pavy's inference, though they are not offered as complete or as anything more than an indication of something as yet unknown.

Taking together the results of experiment, of accident and disease, of mental impressions, and, though not frequent yet significant, the association of glycosuria with insanity, and adding to these the post-mortem evidences of transudation from the cerebral vessels, it is not to be doubted that there is a connexion between the state of the brain and the voidance of sugar which must be taken into account in any theories we may form of diabetes. So far we discern a condition of vascular relaxation which affects the brain and the liver, shown in the one by corpuscular transudation and in the other by arterial fulness after death. Whether a similar want of grasp affects other vascular systems we have little knowledge though the complexion is suggestive. We cannot suppose that what we see is all that is to be seen, but at any rate it is something.

That diabetes any more than chorea or tetanus is a mere functional error, a capricious misconduct on the part of healthy organs or tissues, is a proposition which is repellent to my understanding and, to my mind, impossible. Are we to suppose that we have got to an end of pathology because at present we cannot get any further? That "this effect defective comes by cause" is certain; that this effect if persistent must have a cause which is equally so is likewise certain.

It has been imagined, to take a recent hypothesis before the older, that the essential part of the disease is an inability on the part of the tissues to put the carbohydrates to their proper use in nutrition which, therefore, are discharged as waste in the form of sugar. The error is not over-production but insufficient *consumption*. It is not that too much sugar is made but that too little is used. This failure on the part on the tissues to do their duty is unexplained. They do not look amiss. Whence comes the paralysing or inhibiting influence? If the failure were always senile we might see in it one of the deteriorations of age, but how when it strikes the young possibly in the shape of an almost acute disease? And from another point of view this theory is not satisfying, for it seems inadequate to explain the large quantities of sugar which are sometimes discharged—in an extreme case perhaps two pounds or even more daily. Are we to suppose that in health an equivalent amount of carbohydrate would have gone into the tissues? Could the tissues in health have

[15] Renal and Urinary Affections, vol. i., Diabetes, pp. 35, 36, 37, 38 (Figs. A, B, C, D, E, F).

[16] Loc. cit., p. 44, figs. K and L.

[17] The Physiology of the Carbohydrates, 1894, p. 263.

taken up, or made away with, so much? Yet this they must have done on the theory, so far as I understand it, that in diabetes there is no morbid formation of sugar but only a failure to utilise what is normally made. It is difficult to imagine but that in such cases as I have alluded to we have the making of too much rather than the using of too little. We must have over production rather than diminished consumption and must look for some morbid exaggeration of the sugar making process. It seems probable that the part of the tissues is passive rather than active and a morbid glycogenesis in other words, the excessive making of sugar, the essential part of the disease. As this is often attended with a discharge of sugar more than equivalent to the carbohydrate which in ordinary circumstances we could suppose to be taken up by the tissues we must look for its cause in something more active than a failure on their part to seize the elements of nutrition which are presented to them. We have an active and destructive disease which is difficult to account for by a mere loss of assimilative power on the part of the tissues. We must have the creation of sugar, not the mere misapplication of it.

We fall back on the older view practically that of Claude Bernard according to which the immediate cause of glycosuria is in the liver, the remote cause in the brain. Much labour has since the time of Bernard been expended on the physiology of glycogenesis and the pathology of diabetes. Physiologically much has been accomplished, but in the field of pathology it must be admitted that much remains to be done. Not that nothing has been done but our knowledge in this respect is fragmentary and discontinuous, suggestive rather than conclusive. But it is impossible to ignore the connexion of glycosuria with cerebral injuries of diabetes with mental disturbance, of saccharinity of urine with melancholia, and, to carry on the story after death of evidences and consequences of vascular repletion especially in the brain in the shape of corpuscular extravasation and in the liver of abnormal congestion. The suggestion which these visible signs convey is of loss of contractile power in the arteries. The vascular leakage is not always to be found and therefore cannot be regarded as a necessary step in the establishment of the disease, but it is found often enough (blood in a recent state outside the vessels in eight of 22 cases) to point a moral and to insinuate that there is something generally abnormal in the power of the vessels, though it is only in some that it has gone to the length of extravasation. Thus the hæmorrhages by transudation or rupture which are found in tetanus, chorea, and diabetes are not to be regarded as the cause of the symptoms or essential part of the disease but only as indications of some condition which is so. Granting that we have in diabetes signs of want of tone in the arteries we are not to conclude that we have got to an end but only that we have taken a step in that direction, what it may lead to is as yet unknown. We have not discovered the *primum mobile*. Suspicion points to the brain and in particular to the cortex and medulla but we can at present go no further.

It is not to be assumed that diabetes mellitus is always the same disease or always due to the same cause. It may be due as is now known to pancreatic mischief. It is in touch with gout which it sometimes replaces as if it were a form of gout, the articular symptoms absenting themselves in the presence of the glycosuria. Diabetes is often hereditary as are some diseases which belong to the nervous system and some which do not. We have much to learn about gout and heredity and about the origins and kinds of diabetes but whatever the future may have in store for us it can never abolish the experimental and clinical facts which associate glycosuria with morbid influences acting by way of the nervous system nor dissociate diabetes from certain disorders undoubtedly pertaining to the same system which, notwithstanding that they were or still are by some regarded as 'functional' display signs of perivascular disturbance which forbid them to be so regarded if by functional is meant 'without material change'.

PS.—This paper not quite a pretend to contain anything new stock of the old, with such modi time has made necessary. It is well now and then to look back and see where we stand while we await further facts which the future cannot fail to provide.

Stanhope place, W.

SOME UNUSUAL EFFECTS OF MOVEABLE KIDNEY.

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MOVEABLE kidney is one of those curious affections which sometimes give rise to very serious symptoms and sometimes to none at all and in which the gravity of the symptoms does not appear to bear any relation to the amount of the movement. It may form a tumour which descends into the iliac fossa whenever the patient stands up or coughs without causing more than a feeling of discomfort or it may cause very serious consequences from pressing or dragging upon neighbouring structures, even though it scarcely descends sufficiently far below the ribs to be felt. There is a good deal of truth in the saying that a kidney which simply descends behind the peritoneum and fascia which cover it in front may become the seat of hydronephrosis from kinking of the ureter, or of tubercle or calculus from being repeatedly bruised but it will not, as a rule, interfere with other organs while one that simply tilts forward without descending to any great extent, even if it is only the upper end that tilts, may lead to very grave inconvenience and give rise to the suspicion that the patient is suffering from disease of some of the neighbouring organs. Fortunately, the diagnosis rarely presents any difficulty. Whatever the nature of the symptoms to which a moveable kidney gives rise, whether they are those of ulcer of the stomach or of gall stones or of inflammation of the appendix there is one test which enables the true cause to be distinguished at once and almost without fail. Symptoms that are due to a misplaced kidney are relieved and in most instances disappear entirely as soon as the patient is placed in the recumbent position. When they are due to organic disease of other organs change of position has little or no effect.

In one case under my care a moveable right kidney gave rise to a series of symptoms resembling very closely those ordinarily present in chronic gastric ulcer. The patient was a married woman 44 years of age, who had had nine children six of whom were living. For the last 20 years she had suffered from pain in the epigastrium, shooting round to the back and shoulders. The pain invariably came on from a quarter to half an hour after meals. Solid food made it worse, vomiting was frequent and was rather encouraged as it relieved the pain. Scarcely a day passed without at least one attack and for the last nine months there had been no respite. 21 months ago there had been three attacks of hæmatemesis the amount said to have been as much as three quarts and there was melæna at the same time. The abdomen was large and flabby. According to the patient's account she had been getting thinner. The stomach was not dilated or displaced, the lower border being situated about two inches above the umbilicus. There was a little tenderness on deep pressure to the right of the epigastrium but no tumour could be felt. Both kidneys were moveable, the right one in particular descending so far when the patient strained or coughed that it came quite below the thorax and the hands could be made to meet above it. While in the ward lying in bed waiting for operation the vomiting, which had been more and more troublesome and which was the immediate cause of her seeking admission, ceased entirely and the pain after food diminished so materially that it scarcely interfered with her comfort. This led me to the conclusion that the mobility of the right kidney was the chief, if not the sole cause of her symptoms whether it acted mechanically by dragging upon the duodenum and pylorus or whether it irritated the splanchnics in some way leading to persistent congestion of the mucous membrane of the stomach with its [illegible]ndant consequences chronic gastritis and hæmatemesis. [illegible] right kidney accordingly was exposed through an incision [illegible] the lumbar region all the fat around was removed and three kangaroo-tendon sutures were passed through it [illegible] securing it to the wall. Iodoform gauze was packed around the outer border and lower end of the kidney to prevent any strain falling upon the sutures during vomiting and to

secure fixation by adhesion afterwards and the wound was closed. The subsequent progress does not need any description. The patient was kept in bed until the wound was soundly healed and then allowed to get up, wearing an abdominal belt as a precaution. There were occasional attacks of dyspepsia afterwards, but so far as the severe pain and vomiting were concerned relief was complete.

In two other cases under my care about the same time the effect of the displacement of the kidney fell not so much upon the pylorus as upon the gall-bladder and the common bile duct. One of these patients was a young woman, unmarried, 26 years of age. The other was married, with a large family, and probably was a little over 40 years old. The history they gave was practically the same, so far as important details were concerned. In both there had been repeated attacks of colic beginning in the right hypochondrium and resembling mild attacks of biliary colic but bearing little or no relation to food. They did occur after meals, it is true, but they occurred almost as frequently at other times. At night they rarely occurred. In the elder of the two these attacks had lasted a good deal longer and were more severe than in the younger. In her, too, they were often attended by jaundice, which, however, rarely lasted longer than two or three days. Occasionally there was sickness, but it was not sufficiently regular or frequent to enable it to be said that it was dependent upon the colic. There was tenderness in the right hypochondrium in both, especially after one of the attacks. The liver was not enlarged and no tumour could be felt when the patient was lying down. When standing up and leaning forwards, supporting the weight of the upper part of the body upon the hands so that the abdominal muscles were relaxed, a sensation of deep resistance was felt over the region of the gall-bladder, especially in the case of the elder patient, but the gall-bladder could not be defined. The elder of the two volunteered the statement that if she could only get to bed and lie down for a few hours the pain almost ceased and that very often it returned after she had been up some little while. The lower end of the right kidney could easily be felt in both when they were standing upright but it was not moveable in the ordinary sense of the term—that is to say, though it descended distinctly when the patient took a deep breath it resumed its former position as soon as the pressure of the diaphragm was taken off.

All kidneys are moveable. In a good many people the upward and downward range of movement is more than an inch and may be as much as two inches. When such a kidney is placed rather lower down than usual, owing perhaps to a long narrow thorax, it can easily be felt and may be mistaken for a pathologically moveable kidney. This term, however, should be reserved for kidneys which not only descend but which fail to re-ascend spontaneously when the diaphragm relaxes, and which do not regain their natural position unless either the patient lies down or some external pressure is brought to bear upon the abdomen. In neither of these patients was the kidney moveable in this sense, but for all that I have no doubt that it was the cause of the symptoms of which they complained by the way in which it pressed upon the cystic or perhaps the common bile duct. At least it is certain that after the kidney had been exposed and sutured to the posterior wall in the way I have just described they were both completely relieved. The explanation is, I believe, to be found in the kind of movement the kidney undergoes in these cases. In ordinary ones it glides up and down behind the peritoneum and does not come into relation with the bile ducts. In these the lower end appears still to retain what attachments it has and the upper end drops forwards, so that the kidney assumes a horizontal rather than a vertical position. This form of displacement was, I believe, first described by Potain who spoke of it as anteversion of the kidney, and he, too, considered that it was in some way related to what may be called, for the sake of brevity, biliary symptoms. Potain, however, appears to me to have mistaken cause and effect. According to him irritation about the biliary passages leads to a general relaxation of the serous and subserous tissues in their neighbourhood and this in its turn to loosening and displacement forwards of the upper end of the kidney. It seems to me more rational to regard the displacement of the upper end of the kidney as the primary cause and the temporary closure of the bile ducts as the consequence. Cases in which similar symptoms have been caused by complete downward displacement of the kidney have been recorded by Dr. W. Hale White and Mr. W. Arbuthnot Lane,[1] and also by Dr. T. J. Maclagan and Sir Frederick Treves,[2] but, so far as I am aware, no one hitherto has associated them with simple anteversion, a condition which probably is much more common than is usually suspected. I may add that neither of my patients could have been accused of the smallest degree of tight-lacing, which has often had the credit of causing these symptoms, nor was there any suspicion in either of them of general enteroptosis or rotation of the liver.

A third case presenting closely similar features was under my care about the same time. It differed, however, in one important respect, for the kidney was much more moveable and slipped down in the usual way when the patient stood upright and coughed or strained. What the immediate mechanism may have been in this case is not easy to say, for the kidney when it glided down appeared to lose all relation to the biliary ducts. It is possible that there may have been some adhesions between the gall-bladder, on the one side and the hepatic flexure of the colon and the other structures, which must be displaced to some extent when the kidney descends, but the patient refused operation so that I am not able to speak more definitely.

Inflammation of the appendix is another trouble which I have known on several occasions to be simulated very closely by moveable kidney. A short time since a patient, a young woman, unmarried, 24 years of age, was sent to me because of a swelling which had made its appearance in the right iliac fossa. It had been diagnosed quite correctly as a moveable kidney but the symptoms of which she complained bore no relation whatever to the kidney but were exactly those which are present in an ordinary case of mild inflammation of the appendix. Whether she had been reading the subject up or comparing notes with friends who had suffered from genuine inflammation I cannot say, but the recurrent attacks of colic, with constipation and abdominal tenderness, brought on by exercise or by trivial indiscretion in diet, were so accurately described that I was led to examine her appendix and found it perfectly healthy. Instead of removing it I proceeded at once to suture her kidney into its place and from that date the symptoms disappeared. In connexion with this case I may mention that on another occasion I removed a calculus, fixed in the cortex at the lower end of the right kidney, in a man who had already had his appendix removed for recurrent attacks of colic without experiencing the slightest relief. What may have been the condition of the appendix at the time of the operation I cannot, of course, say, but certainly the pain which led the man to undergo both operations was due to the calculus, for it was not benefited by the first and was completely removed by the second.

The difficulty of forming an accurate diagnosis in these cases is made considerably greater by the well-known fact that moveable kidney and inflammation of the appendix are not infrequently associated together. So commonly, in fact, do they occur together that it has been suggested that there must be some causal connexion between the two. The reason that is usually assigned is the pressure of the displaced kidney upon the mesenteric veins. This would lead to chronic congestion of the mucous [illegible] and would in this way render it more susceptible to septic organisms which are the immediate cause of all such attacks. But I am not aware of any case in which this has been proved and as a rule the kidney, when it comes down sufficiently far to press upon the mesenteric veins, enjoys such a range and such freedom of movement that it would be hardly likely to press upon them for a sufficient length of time to produce this result.

There is no doubt that moveable kidney is a much more common affection than is usually believed. It has been said and it is probably correct, that the range of mobility is pathological in 10 per cent. of women. In a very large proportion of these cases the patient knows nothing about it and should be left in happy ignorance of it. It causes no symptoms worth mentioning and needs no treatment. But there is a small percentage, amounting, however, in the aggregate to a very large number, of which this is not true. In dependently of what may be considered to be subjective symptoms they suffer very commonly from gastric and other

[1] Brit. Med. Jour., 1892, vol. i., p. 223.
[2] THE LANCET, Jan. 6th, 1900, p. 15.

ubles which are often put down to simple dyspepsia, but which I cannot help thinking are in many cases due either to complete displacement of the kidney or to that much more insidious anteversion which can only be ascertained by examining the patient in the position I have described Such cases can be cured by early operation

Unfortunately, if matters are allowed to drift on definite organic changes may be induced, either directly in the structures concerned or indirectly through the medium of the nervous system and the evil perpetuate the symptoms even after the original exciting cause has been removed

Wimpole-street W

ANKYLOSTOMIASIS IN WESTPHALIA, HUNGARY, AND CORNWALL

BY THOMAS OLIVER M A DURH M D GLASG, F R C P LOND,

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FOUR months ago, in conjunction with Mr Hermann Belger of the Durham College of Science I visited the coalfields of Westphalia and Hungary with the object of studying ankylostomiasis, of learning something of the social industrial and medical conditions under which mining operations are conducted there and of contrasting these with those found in Cornwall

We chose Bochum in Westphalia as our vantage ground for not only is it the most important mining centre of Westphalia also that where the disease commenced and has been most severe, but it is here that Dr Tenholt lives who is recognised as the principal authority on ankylostomiasis in Germany and who is the medical head of the Knappschaftsverein or Miners Assurance Union, with its 265 000 members At the Elizabeth Hospital, Bochum (400 beds) on the date of our visit there were 30 patients in the institution suffering from the worm disease and of these 19 were convalescent The men who are afflicted with this malady are kept in a part of the building separate from that reserved for the other patients, they have their own set of lavatories with annexa for the examination of fæces Dr Nagel is in charge of the bacteriological laboratory at the Elizabeth Hospital Here we were joined by Dr Tenholt It is at the Elizabeth Hospital that the most important pathological investigations are carried on Courses of clinical and pathological instruction are given in the hospital by Dr Tenholt and Dr Nagel The former has already had through his hands 300 young practitioners who after their special training, have been sent to the mining districts to combat the disease In our visits to the Lothringen and Erin mines in the neighbourhood of Bochum we had the privilege and the pleasure of Dr Tenholt's company and I take this opportunity of thanking him through THE LANCET for his valuable assistance ungrudgingly given

It is impossible otherwise than to admire the well thought out plans and th
and the Miners'
a new workman
must proceed to one of the hospitals defecate there have his stool microscopically examined, and receive a certificate of health from the medical officer and for this the miner pays 1s It has been found necessary to make the miners pay for the medical certificate as it prevents them moving about from one mine to another, also the authorities have been obliged to enforce personal attendance at a hospital of the applicants for work as the men used to bring for microscopical examination not their own but the faeces of their wives and children

(1) The spread of ankylostomiasis through Westphalia is attributed to the rapid opening out of the mines during the last few years So great was the demand for coal a short while ago that in one year 20 000 new miners had to be introduced into Westphalia These men came from Poland East Germany, Poland, and Italy At the present time Italian miners if they pass the medical officer, are accepted but Hungarian miners are not engaged upon any condition How the disease was imported into Westphalia it is difficult to say but it has been an expensive item for this part of Germany Ankylostomiasis has cost the Miners' Association little short of £200 000 For each report of a case of ankylostomiasis furnished by a medical man the association pays 1s This includes payment for a microscopical examination of the stools which in all instances must be made One medical man examined 8000 cases a short while ago and received £400 for examining and reporting upon the same Owing to the Westphalian mines containing a good deal of coal dust and explosive gases spraying with water was made compulsory by the Government three or four years ago Since watering the mines the number of cases of ankylostomiasis has materially increased According to the *Deutsche Bergarbeiter Zeitung* the number of miners in the valley of the Ruhr—i e the district above mentioned—who have suffered from ankylostomiasis is as follows —

1896	1897	1898	1899	1900	1901	1902
107	113	99	94	279	1130	1355

As a supplement to this I reproduce in full the table which appears in the report on ankylostomiasis of the Special Commissioner appointed by the *Colliery Guardian* and published in 1903 an excellent report by the way, and one full of interesting information The total staff employed in the 289 mines in the district in 1902 was 256 000

Year	Number of pits infected	Number of cases reported	Proportion of cases per 10 000 miners in work
1896	15	107	6 4
1897	31	113	6 2
1898	23	99	4 9
1899	26	94	4 4
1900	40	279	11 7
1901	63	1030	40 6
1902	66	1355	52 9

It was in 1900 that compulsory regulations for watering mines in Germany were introduced The sudden rise in the returns of cases about this time is more than a coincidence As indicating a causal connexion between sprinkling the workings in the mine with water and ankylostomiasis the figures published by the Miners Association are of importance In 1901 of 63 infected pits there were 57 in which spraying with water was being carried on and in these there were 1021 cases of ankylostomiasis while in other six infected but unwatered pits there were only nine cases of the disease

In 1902 the number of men suffering from ankylostomiasis in Westphalia was simply alarming in the Erin coal mine there were in 1902 297 patients in Graf Schwerin 296, and in the Shamrock pit 258

At the Lothringen mine there are at present 2000 men employed of whom 1600 work underground Ankylostomiasis broke out here in 1885 Two years ago 72 per cent of the men working underground were suffering from the miner's worm disease to day only 8 per cent Down the pit I found every 300 yards or thereabouts earth closets or portable pails for the use of the miners These pails which were made of galvanised iron were found usually in very accessible places were surrounded by sacking and thus were partly screened from view At other places these pails were placed in recesses in the rock and screened off by sacking The ground immediately around was strewn with lime and crushed stone Here and there by the side of the main ways in the mine were pools of stagnant water or heaps of slimy mud rich in the ova and larvæ of the ankylostoma duodenale The larva of this intestinal parasite attack the timber props of the mine, causing them to be wet and to become rotten According to Dr Tenholt the larva seldom ascend higher in the wooden props than one yard from the ground In one of the sideways in the mine which was infested with the larvæ we had the opportunity of seeing some experiments carried out by Dr Tenholt—viz, sprinkling the mine with a watery solution of quicklime Preparatory to this being undertaken infected miners were asked to defecate in this particular gallery, the temperature of which is rather high, and in 14 days owing to the favourable temperature the ova had become changed into larva This is the average length of time in the mine for the development to occur

At this point I may incidentally remark since I shall not

the only direct evidence of intracranial suppuration. As to the treatment little need be said. The obvious indication is to evacuate the pus and to provide free drainage by operative means.

Subsequent note.—The patient made an excellent recovery from the operation and was quite well for a year after. I was then asked to see her again. She was suffering from slight earache and had an abscess of considerable size over the mastoid, raising up the linear scar of the old operation wound. There was but little discomfort referred to the ear itself and there was no perforation or discharge. I carefully cleaned the skin over the abscess and with due precautions withdrew a sample of the pus for bacteriological examination. It was reported to contain pneumococci. The abscess was opened and healed readily. I have reason to know that the patient remained in good health for about two years afterwards. Her medical history then showed the following interesting sequence of events occurring at intervals of a year: (1) an attack of pneumonia of moderate severity (September, 1900); (2) an attack of acute catarrh of the middle ear with extradural abscess having the clinical characters of a pneumococcic infection as detailed above (September, 1901); and (3) slight earache with large abscess over the mastoid of pneumococcal origin and evidently due to infection through the middle ear and antrum (October, 1902). Apart from the interest of the individual manifestations this history shows the remarkable tendency to recurrence of pneumococcal infection or perhaps more correctly the persistence of the infection in a latent form with periodical outbreaks.

Oldham.

NOTE ON MERCURIAL INJECTIONS IN NERVOUS DISEASES OF SYPHILITIC ORIGIN.[1]

BY DR. MAURICE FAURE,
LA MALOU.

(*Translated for* THE LANCET.)

PERSONS suffering from nervous diseases are very sensitive to certain methods of medical treatment and the generally accepted restrictions with respect to the use of mercurial remedies are specially applicable to such patients. I will here detail in a collective form some of these restrictions, the soundness of which has, in my estimation, been confirmed by prolonged observation of a large number of patients presenting nervous symptoms of syphilitic origin.

Injections of soluble salts (Note 1) given either every day or three times a week are the most recommendable form of treatment, for in this way the amounts administered can be determined with more precision than by other methods. Pills and other preparations to be swallowed often produce, even when taken in small quantities, intestinal troubles in nervous disease. With inunction (*frictions*), grey oil, and injections of insoluble salts it cannot be exactly known how much of the remedy has been absorbed and in what space of time. This being so, the patient's general state may, when the limit of toleration has been exceeded, undergo a sudden and transient deterioration, leaving behind it a long-continued aggravation of the nervous troubles, the relief of which was hoped for. It is desirable to avoid routine practice and the giving of the same mercurial salt to all patients suffering from nervous diseases. In the selection of a method of treatment the medical man ought to be guided not by his preconceived ideas but by prolonged observation of the patient. Individual idiosyncrasies with respect to toleration ought to be ascertained. In general, the familiar preparations of benzoate, biniodide, and perchloride of mercury agree well when given in ordinary doses, while cacodylate, hermophenyl, and other organic compounds agree even better but seem to be less active in equivalent doses (Note 2) and may be reserved for delicate patients. By varying the nature as well as the doses of the salts administered remedies which cannot be tolerated continuously may be tolerated for a limited time (Note 3).

The therapeutic result is not proportionate to the quantity of mercury administered, some preparations being more active than others. Two facts may here be mentioned—namely, (1) that patients who have not derived any benefit from a given preparation or from small doses have improved under the use of another preparation or of larger doses; and (2) that patients who have become worse when treated with a certain salt or with large doses have improved when a different salt or small doses were substituted (Note 4).

In the case of a young patient suffering from nervous disease whose general state is in other respects normal and in whom the lesion is recent and quite local (a gumma, for instance) mercurial treatment may be used with the same intensity as in any syphilitic manifestation whatever. With middle-aged patients not in very good condition and having disseminated lesions (such as disease of the cerebro-spinal vessels, tabes, and general paralysis) mercurial treatment ought to be commenced cautiously and watched with close attention. Moreover, the patient might have secondary infections of certain viscera, such as the bladder or intestines, associated with paralysis or atony of the organs in question. Though these conditions are of infective origin mercury has no remedial action on them and the temporary lowering of the general health which a too energetic mercurial treatment may bring about renders these infective processes more active. With elderly persons presenting nervous symptoms of syphilitic origin greater circumspection is required; the state of the kidneys must be carefully investigated by means of a complete analysis of the urine and observation of the renal efficiency.

The duration of the treatment and the doses employed will naturally depend on the effect produced, on the state of the patient, on the special object in view, and the like; they cannot be pre-arranged on a uniform system for all cases. These precautions, the greater part of which are to be found in the teaching of Fournier, are the best guarantee of therapeutic success. After having been for a long time employed in an inadequate manner for the relief of nervous symptoms of syphilitic origin mercurial treatment is at present often carried on more actively than is good for patients suffering from nervous diseases. It is desirable that these extremes should be avoided and that preparations and doses conforming to each individual's powers of resistance should be selected in order to insure the success of mercurial treatment in nervous diseases of syphilitic origin.

Note 1.—All our injections are intra-muscular. When this plan is adopted there is little or no induration and pain is of exceptional occurrence. The injection ought to be given very slowly and followed by gentle massage. The place for injection is the buttock and the average depth is four centimetres.

Note 2.—The equivalence of doses in the case of different salts is ascertained from the amount of mercury in each salt, assuming, of course, that the chemical valency of the mercury is the same in the groups which are compared. A centigramme of mercury per day is the average dose; there are patients who cannot take so much but many can take more than that.

Note 3.—Our series of injections of soluble salts vary from 6 to 20 administrations. The series is repeated after a pause of equal duration to make up a total of from 40 to 80 injections for a course of treatment to be spread over one or two years. With insoluble salts we have made weekly injections numbering from 6 to 12, and after an interval of some weeks another series is recommenced. There is no definite limit except the tolerance of the patient.

Note 4.—An intensive treatment is not necessarily a heroic treatment, for intensity may be obtained insidiously by very prolonged administration and the use of average doses frequently repeated. It is necessary to give the patient all the mercury that is required for the cure of the disease without giving him enough to produce toxic symptoms.

[1] A communication to the Seventh French Congress of Medicine, Oct. 24th to 27th, 1904.

DIPHTHERIA IN BRADFORD.—Dr. W. Arnold Evans, medical officer of health of Bradford, in a report on the prevalence of diphtheria presented to the health committee of that city, states that the disease showed a gradual increase during the period from 1900 to 1903, followed by a remarkable rise in 1904. In 1903 there were 196 cases, with 52 deaths, while for the ten months up to the end of October, 1904, there have been 678 cases with 119 deaths. By far the larger number—namely, 517 cases out of the 678—occurred in children between three and 13 years of age. The children attending St. Stephen's schools in West Bowling have been especially liable to be attacked.

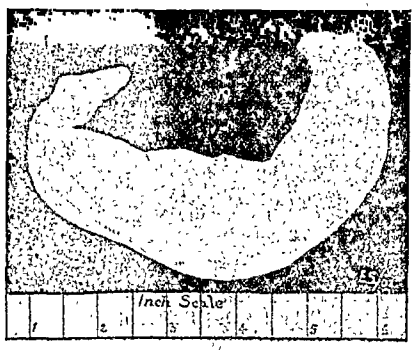
A CURIOUS CASE OF GENERAL TUBERCULOSIS IN WHICH A COMPLETE CAST OF THE STOMACH WAS VOMITED.

BY EDWARD SWALES, M.R.C.S. ENG., L.R.C.P. LOND.,
FORMERLY THIRD ASSISTANT MEDICAL OFFICER, KENT COUNTY ASYLUM, MAIDSTONE.

IN the following case, which came under my care in February, 1902, the patient was a male epileptic imbecile, aged 16 years. On April 7th he refused his food and appeared to be very ill. He was put to bed immediately and his temperature was found to be 103·6° F. On a most careful examination of the chest and abdomen being made no physical signs of disease were discovered. A saline draught (sulphate of magnesium, one ounce; tincture of senna, half a drachm; and water, two ounces) was given to relieve the constipation and the diet was limited to milk and soda-water. At 6 P.M. the temperature had risen to 105·6°. He was therefore wrapped in a sheet wrung out of tepid water and the temperature was carefully taken at regular intervals. The wet pack was continued until the temperature had fallen to 103° (the temperature in every case being taken in the rectum), which occurred in one and a half hours. During this time small draughts of whisky and water were given to support the heart, which was beating very rapidly (from 120 to 130 per minute) and to induce diaphoresis. He was now removed from the wet pack and put into dry clothing when he fell asleep immediately. He slept quietly for three hours, after which he became restless and fretful. By 2 A.M. on the 8th the temperature had again risen to 105°. The mixture which he was taking at this time was the following: sulphate of quinine, one drachm; phenazonum, two drachms; spirits of chloroform, three drachms; and water to 12 ounces; one ounce every four hours. At 10 A.M. the temperature was only 100·8° but at 6 P.M. it had again risen to 104·2°. From the accompanying chart (Fig. 1) it will be seen that the temperature had taken on an oscillating character but with no regularity or periodicity. On again examining the chest I found a patch of dulness of about the size of the palm of the hand, posteriorly on the left side, at the level of the angle of the scapula. The breath sounds, vocal fremitus, and vocal resonance were all increased over this area and a few fine "hair-like" crepitations were distinctly audible at this spot.

On the morning of the 12th he was much weaker and vomited for the first time since taking to bed, the vomit consisting of a complete cast of the stomach. The cast was composed of curdled milk. The accompanying photograph (Fig. 2) was taken immediately and before any shrinking had taken place. Its size is indicated by an inch scale photographed with the specimen. The temperature still kept very high and reached a maximum on the 14th (106·2°), when he died.

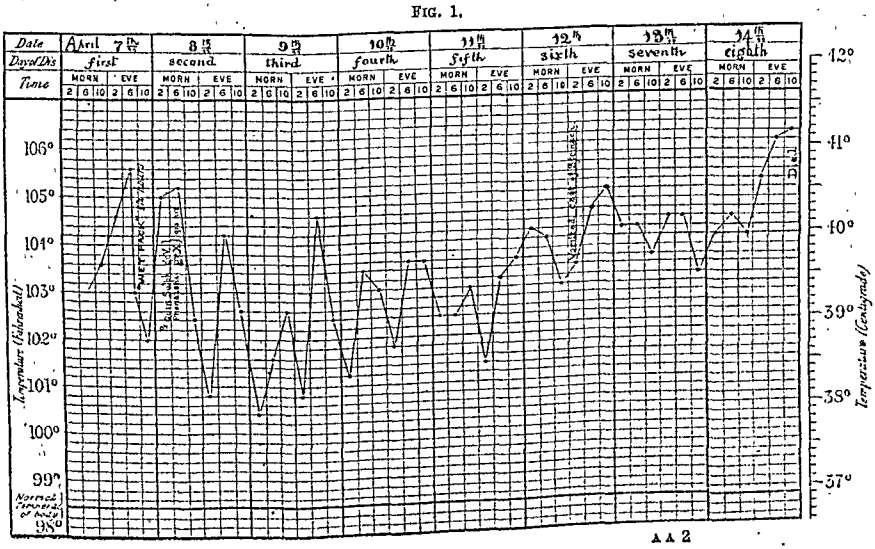
FIG. 2.



Complete cast of stomach.

The following notes are from the post-mortem report of the case. The membranes of the brain were very deeply congested and many small opaque spots (miliary tubercles) were scattered over the surface of the arachnoid, more especially at the base. The brain substance was shrunken and very soft. The vessels were markedly injected. The ventricles contained some excess of slightly turbid fluid. The cerebellum, pons Varolii, medulla, and basic ganglia were similar in every respect to the cerebrum. There was no excess of fluid in the pleural cavity. The whole substance of the lungs was in a condition of extreme congestion and of presented many small areas of a darker colour and of

FIG. 1.



denser consistence than the surrounding lung tissue. The left lung was in precisely the same condition, but presented one large patch of pneumonic consolidation on the posterior aspect of the lower lobe. The pericardium was intensely injected and contained about two ounces of clear fluid. The muscular substance of the heart was very soft, pale, and swollen. The peritoneum was injected and many miliary tubercles were scattered over the surface of the intestines. There was no excess of fluid in the peritoneal cavity, the exudation being of a sticky consistence. The intestines themselves were matted together, owing to previous peritonitis, and could not easily be separated. The stomach was quite normal in appearance. The liver was soft, swollen, and very pale. The spleen and the pancreas were both enlarged and congested. The kidneys were very pale and granular; the right one contained a small abscess, probably from infarction. The bladder was normal.

The weights of the various organs were as follows:—Cerebrum, 39 ounces; cerebellum, 5¼ ounces; pons and medulla, 1 ounce; right lung, 15 ounces; left lung, 12½ ounces; heart, 7¾ ounces; liver, 53 ounces; spleen, 9 ounces; right kidney, 4¾ ounces; and left kidney, 4¾ ounces.

I am indebted to Dr. F. Pritchard Davies, late superintendent of the asylum, for permission to publish this case.

West Kirby, Cheshire.

MORBILLI SINE MORBILLIS: A CASE WITH COMMENTARY.

By J. D. ROLLESTON, M.A., M.D. OXON.,
ASSISTANT MEDICAL OFFICER AT THE GROVE FEVER HOSPITAL OF THE METROPOLITAN ASYLUMS BOARD.

A GIRL, aged five years, was admitted to hospital with scarlet fever on Sept. 17th, 1904. She had been ill for three days. The rash, which was fading on admission, had entirely disappeared by the 19th. Characteristic desquamation followed. Beyond a faint trace of albumin present in the urine on Oct. 17th nothing noteworthy occurred till the 26th when the temperature, which had hitherto been normal, rose at 8 P.M. to 99° F. and at midnight to 99·6°. The following day she vomited, an erythema appeared on the body, and the fauces and soft palate were injected. The temperature at 8 P.M. was 102°. During the night she coughed several times. On the 28th the rash had faded but the pyrexia persisted; the morning temperature was 100·2° and the evening temperature was 101°. Nothing fresh was noted on the 29th. The temperature was still slightly raised (in the morning it was 99·8° and in the evening 100°) and the cough continued to be frequent. On the 30th at 2 P.M. the buccal mucosa was found to be injected and showed three definite Koplik's spots. An urticarial wheal was seen close to the umbilicus. The temperature was 100°. At 11 P.M. several urticarial wheals were seen on the trunk, the cough was troublesome, there was profuse coryza, and signs of bronchitis were present in the chest. The temperature was 101·2°. On the 31st the urticaria and Koplik's spots had gone. No other eruption was seen though search was made several times in the 24 hours. The coryza and the bronchitis persisted till Nov. 3rd, when the temperature became finally settled. Convalescence was uneventful. No desquamation followed and the child was discharged on the 18th. Inquiry from the mother elicited the history of a previous attack of measles in July, 1903, when three other members of the same family were similarly affected. The rash, catarrhal symptoms, and constitutional disturbance were, however, more marked in the patient under notice than in any of the other children.

Of all the acute exanthemata, measles least frequently assumes anomalous forms. The symptoms, eruption, and temperature curve closely resemble one another in the great majority of cases. Attenuated or abortive attacks, so frequently seen in small-pox or scarlet fever, are much less commonly met with in measles. Their existence, however, has been recognised ever since the time that morbilli was differentiated from scarlet fever by Sydenham[1] who speaks of a febris morbillosa raging in 1674 in which, though the eruption was limited to the back, the neck, and the shoulders, the fever was much more serious than in the ordinary type. Since then the possibility of a non-eruptive measles under the name of morbilli sine morbillis or rubeola sine exanthemate, has been admitted by the majority of writers—e.g., Rilliet and Barthez,[2] Hebra,[3] Erasmus Wilson[4] in the earlier part of the nineteenth century, and by Kaposi,[5] Osler,[6] Dawson Williams,[7] and Caiger,[8] in more recent times. Willan, the father of English dermatology, was the first to describe a rubeola sine catarrho "in which the course and appearance of the eruption was the same as in R. vulgaris but no catarrh, ophthalmia, or fever accompanies it."[9] Many subsequent writers, including such eminent clinicians as Graves[10] and Sir Thomas Watson[11] have confirmed Willan's description. Authorities of weight,[12] however, have not been wanting to deny or to doubt the specific nature of morbilli sine morbillis as well as of rubeola sine catarrho, nor, indeed, can they be effectually silenced until the discovery of the micro-organism of measles is made and its constant presence in these larval forms is established.

In the present case the diagnosis was based on the occurrence of several other cases of measles in the same ward and the presence of catarrhal symptoms, pyrexia, Koplik's spots, and the prodromal erythematous and urticarial eruptions.[13] The erythema was at first taken to indicate a relapse of scarlet fever owing to its appearance preceding the catarrhal symptoms, its association with the injection of the fauces and soft palate (morbillary enanthem), and the occurrence of vomiting, which more often precedes scarlet fever than any of the other eruptive fevers. The mistaken diagnosis of a relapse of scarlet fever accounts for the paucity of Koplik's spots which were fading when first seen. They would probably have been found to be more numerous had the suspicion of measles prompted examination of the buccal mucosa at an earlier date.

The cause of the abortive nature of the disease is to be found partly in the character of the epidemic and partly in the incomplete immunity acquired by the previous attack. In three out of seven other cases infected simultaneously the measles eruption never reached the distal extremities of the limbs. With one exception all made a rapid and uncomplicated recovery. The partial protection afforded by a previous attack of measles is well illustrated by H. Balme[14] who quotes 13 cases, all but one of which had a very mild second attack. Two of these were instances of morbilli sine morbillis, the diagnosis being established on the characteristic symptoms, the presence of Koplik's spots, and the spread of infection to other members of the family in each case. The interval of 39 days between the disappearance of the eruption of scarlet fever and the onset of the symptoms of measles is probably too long for the former exanthem to have in any way contributed to the attenuation of the subsequent disease.

I am indebted to Dr. J. E. Beggs, medical superintendent of the Grove Hospital, for permission to publish this case.

Tooting.

1 ical Observations, Sydenham Society, 1848.
2 [illegible] 1854.
3 Dis[illegible] 1866.
5 Fre[illegible] 1881.
6 Principl[illegible] tion, 1901.
7 Allbutt's Medicine, vol. ii., 1897.
8 Allchin's Medicine, vol. i., 1900.
9 Bateman's Practical Synopsis of Cutaneous Diseases, 1813.
10 Clinical Lectures, 1848.
11 Principles and Practice of Physic, 1848.
12 Fagge and Pye-Smith: Text-book of Medicine, 1901. Comby: Maladies de l'Enfance, 1902, vol. i. Grancher in Brouardel, Gilbert, and Girode's Traité de Médecine, vol. i.
13 Adkins: On the Prodromal Rashes of Measles, Metropolitan Asylums Board Reports, 1899.
14 Practitioner, October, 1904.

DONATIONS AND BEQUESTS.—Under the will of the late Mrs. Holme-Simpson, of Town View, Kendal, and Romanway, Penrith, the Kendal Hospital, as residuary legatee, will receive £10,000.—By the will of Miss Scarrow of Sunderland £500 are bequeathed to the Sunderland Royal Infirmary.—Mrs. Emma Catherine Short of Fakenham, Norfolk, has by her will given £500 to the Victoria Hospital for Children for a "McKellar Cot," and £300 to the Kelling Open-air Sanatorium at Holt, Norfolk.—By the will of Mrs. Britannia Brigstocke of Wolverhampton £100 have been bequeathed to the Wolverhampton and Staffordshire Hospital.—Under the will of Captain William Olive Bird of Norfolk-terrace, Brighton, £200 have been bequeathed to the Westminster Hospital and £150 to the North-West London Hospital, Kentish Town-road, N.W.—Miss Mary Le Lievre of St. Peter Port, Guernsey, has by will bequeathed £200 to the Victoria Cottage Hospital, Guernsey.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

LONDON TEMPERANCE HOSPITAL.

A CASE OF SUCCESSFUL EXTRACTION OF COINS FROM THE ŒSOPHAGUS 23 DAYS AFTER HAVING BEEN SWALLOWED.

(Under the care of Sir WILLIAM J. COLLINS.)

A BOY, aged four and a half years, was admitted into the London Temperance Hospital on Sept. 20th, 1902, with the statement that 18 days previously whilst playing with other boys he had accidentally swallowed "a penny." Since that date his father said that the child had been unable to swallow solids and his diet had been restricted to fluids. Any attempt to swallow a solid morsel was followed by pain. On examination he was found to be a healthy, well-developed child. He did not complain of pain but said he "felt the penny inside" and pointed to the neighbourhood of the xiphoid cartilage as localising the position of the coin. Cross-examination failed to shake his assertion that he had swallowed "a penny." He swallowed fluids without much difficulty but could not be persuaded to try solids. A skiagram was taken and showed distinctly a circular shadow of rather less diameter than a penny piece at the level of the junction of the third and fourth dorsal vertebræ, in the middle line. He, however, adhered to it that it was "a penny" he swallowed. There had been no vomiting and no evidence of ulceration or suppuration although three weeks had elapsed since the swallowing of the coin. The fæces since admission had shown nothing abnormal. No abnormal signs were observed on physical examination of the chest or abdomen.

On Sept. 25th, under chloroform, Sir William Collins passed a coin catcher cautiously down the œsophagus and at its first withdrawal brought up two halfpennies held tightly together by capillarity, slightly streaked with blood and as black as ink. The allegations of the youngster as to the "amount" he had swallowed were thus corroborated and the skiagraphic appearance accounted for. No untoward symptom followed and two days later the child was discharged swallowing naturally and without pain.

NOTTINGHAM CHILDREN'S HOSPITAL.

A CASE OF REMOVAL OF A FRUIT STONE WHICH HAD BEEN LODGED IN THE RIGHT BRONCHUS FOR FIVE DAYS.

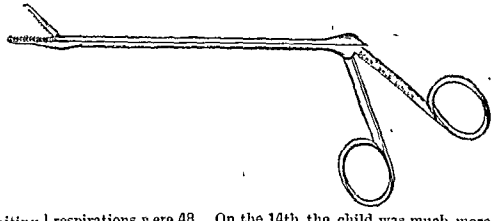
(Under the care of Mr. W. MORLEY WILLIS.)

FOR the notes of the case we are indebted to Mr. W. Henry Duncan, house surgeon.

The patient, a girl, aged seven years, was admitted into the Nottingham Children's Hospital on Oct. 11th, 1904. The history was as follows. On Oct. 7th at about 1 P.M. the child was sent on an errand and on the way she picked up a jam-stone in the street and placed it in her mouth. She choked with it, and a lady who saw her at the time [illegible] id that she felt something [illegible] slipped into the windpipe. [illegible] and the child was sent to school the same day but had [illegible] fits of spasmodic coughing. [illegible] Kirkby was sent for and he [illegible] be removed at once to hospital. This, however, was not done until the 11th.

On admission it was found that the breath sounds at the right base were more distant than those on the left. The percussion note was less resonant; vocal fremitus was unaltered. The temperature was 101° F., the pulse was 140, and the respirations were 60. General bronchitic sounds were also present. The patient was a good subject for laryngoscopic examination but nothing abnormal could be detected in the larynx except some redness. The voice was unaltered. During the day several attacks of dyspnœa occurred but never assumed an alarming character.

On Oct. 12th the breath sounds were markedly weaker over the right side of the chest and signs of pulmonary collapse at various places were found on auscultation. Mr. Willis operated on the same evening. The child was fully anæsthetised with chloroform. An incision was made exactly in the middle line of the neck from the cricoid cartilage and carried three inches downwards. The trachea was opened below the isthmus of the thyroid. During the operation the left innominate vein was not seen but with each inspiratory movement the anterior mediastinal structures covered by the fascia bulged into the lower part of the wound. A probe was passed into the trachea and the body was detected in the right bronchus. It was removed at once with crocodile forceps. Much muco-purulent material was coughed up through the wound, feathers being employed to get it away from the trachea. The opening in the trachea was not sutured but the wound was stitched up, a small tube being passed down to the tracheal wound. On the 13th the condition of the lung was as before. The tube was taken out and a gauze plug was inserted in its place. The temperature was 102°, the pulse was 136, and the



respirations were 48. On the 14th the child was much more comfortable. The pulse and respiration were diminished. The dressing was changed. Subsequent progress proved uneventful and the patient left the hospital a week later.

Remarks by Mr. WILLIS.—The only comments I have to make on this case are: (1) the evidence of the history and the physical signs made the presence of the foreign body in the bronchus reasonably certain; (2) the ease with which the large bronchi can be explored after a very low tracheotomy has been performed; (3) the value of the forceps used for the extraction of the stone, which forceps were originally devised for the extraction of gall-stones (Fig. 3376 of Messrs. Down Bros.' catalogue); (4) the extent to which the structures of the anterior mediastinum bulged into the neck with the movements of respiration; and (5) the necessity for, and fortunately the possibility of, using the utmost deliberation in the operation especially up to that time when the trachea is opened.

ROCHDALE INFIRMARY.

A CASE OF MALIGNANT PUSTULE OF THE FOREARM TREATED BY EXCISION; RECOVERY.

(Under the care of Dr. W. J. KERR.)

FOR the notes of the case we are indebted to Dr. T. I. Wallace, resident medical officer.

The patient, a man, aged 62 years, was admitted into the Rochdale Infirmary on Nov. 4th, 1904, giving the following history. On Nov. 1st he first noticed a small red papule half way up his right forearm which caused him no inconvenience beyond a little itching. In the next few days, however, the arm became very much swollen and compelled him to seek advice. On admission a pustule having the following appearance was present on the right forearm. The centre of the pustule was about half an inch in diameter and consisted of a black and very dry slough. Immediately outside this was a complete ring of about four or five vesicles filled with clear fluid, while outside these again there was a red ring of intense congestion gradually fading into the normal skin beyond. The whole forearm was much swollen and extending up from the pustule half way to the axilla was a red line of lymphangitis. The axillary glands were enlarged and tender to pressure. The temperature was normal and the

pulse was 80 per minute. There was no pain. A cover-glass preparation was made of a scraping from the black necrotic tissue in the centre of the pustule and stained with methylene blue. The anthrax bacilli were easily recognised. The diagnosis having been thus confirmed the pustule was freely excised and the wound was swabbed with a strong solution of chloride of zinc. The swelling of the arm and the lymphangitis disappeared in the course of two or three days and the patient was allowed to go home on Nov. 13th, the edges of the wound having been previously drawn together with silk sutures.

Remarks by Dr. WALLACE.—As regards the origin of the case, the man was employed by a firm of flannel manufacturers and about two months before admission he had the work of cutting the hair off a number of cattle tails. These tails came, he thinks, from Hull. On the day before admission he was lifting down a wire rack on which the hair had been placed and cut the skin of his right hand. His coat was on at the time and he is sure that he did not injure his forearm. It is possible that the bacilli gained entrance through the wound of the hand and travelling up the lymphatics were arrested in the forearm, growth taking place there.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Paget's Disease of the Gum.—Obliterating Arteritis.—Intra-intestinal Cystic Swelling.

A MEETING of this society was held on Dec. 6th, Mr. RICKMAN J. GODLEE, the President, being in the chair.

Mr. A. HOPEWELL-SMITH read a paper on Paget's Disease of the Gum. He said that this was probably the first occasion that such a disease had been noticed as affecting the oral tissues, Paget himself originally describing it in 1874 as a disease of the mammary areolæ, while Butlin, Wickham, and others had added to their knowledge of the subject. That the genitalia might suffer sometimes had been conclusively shown by Pick, Rolleston, Fordyce, and Colcott Fox, whilst MacLeod had recently reported one instance of Paget's disease of the umbilicus. In the present case the condition affected the periphery of a new growth of the jaw—a so-called "epulis"—in a patient aged 25 years. There was a history of three years' duration but no record of any obvious source of irritation or predisposing or exciting cause. The neoplasm had the appearance of a periosteal fibroma with patches of blood-red kerato-hyaline material on its smooth free surface. Sections were cut and stained with hæmatoxylin and eosine, polychrome methylene blue, and also by van Giesson's method. Microscopically there was a tendency towards desquamation of the stratum corneum and its surface was covered with kerato-hyaline masses. The cells were ballooned and many were filled with the same granular or homogeneous matrix producing in many places meniscus-like bodies, some of which measured from 3μ to 10μ. Nearer the rete mucosum many of the "spring" cells had lost their intercellular bridges and were no longer separated by inter-epithelial channels. Some of their nuclei were in a "resting" stage but the condition described by Hektoen and Riesman as hypochromatosis was present, as were also typical heterotype amphiasters, ring chromosomes and centrosomes, and other signs of asymmetric mitoses. There were some evidences of karyoclasis and even karyolysis. Darier's so-called "coccidia" and typical myeloid cells could be here and there easily discriminated. In addition, and equally important, were the cell nests pathognomonic of squamous carcinomata, some measuring as much as 25μ in length. The basement membrane was extremely irregular in outline and penetrated the cutis vera to the depth of 250μ. In several places there had been an eruption of epithelial cells through the membrane into the interpapillary spaces. Parts of the circumference of the growth were surrounded by epithelium which had become œdematous and showed signs similar to those of chronic eczema. The interpapillary processes were crowded with a small round-cell infiltration which was most marked in the neighbourhood of the cell nests and beneath the eczematous surface. The infiltration consisted, as usual, of Unna's plasma cells, some eosinophiles, a few polymorphonuclear leucocytes and lymphocytes, together with the "mast" cells of Ehrlich. In attempting to elucidate the histogenesis of this case Mr. Hopewell-Smith expressed his opinion that Cohnheim's embryonal theory fell to the ground, as did also the mechanical sequestration hypothesis of Ribbert as well as the anaplasic theory of Hansemann. There seemed to be some evidence, however, to support the views of Thiersch and Waldeyer and to corroborate the recent investigations of Farmer, Moore, and Walker. The belief of Colcott Fox and MacLeod, as expressed in a recent paper in the *British Journal of Dermatology*, was favoured by Mr. Hopewell-Smith. Mr. Hopewell-Smith, in conclusion, alluded to the great immunity of the cheek and oral mucous membrane from squamous carcinomata and emphasised the fact that all morbid tissues should be systematically examined microscopically, no matter whether for diagnostic, confirmatory, or other purposes, as new and unrecognised manifestations of disease might often be superimposed upon older, more apparent, and less malignant lesions and neoplasms.—Mr. S. G. SHATTOCK said he considered that the evidence on which Mr. Hopewell-Smith had described the case as one of Paget's disease was most unsatisfactory. The specimens of in-growing epithelium which had been shown were but a normal appearance dependent on the direction of the section. Mr. Hopewell-Smith had described but a small portion of a large tumour and from the description given it was impossible to form any opinion as to the nature of the growth. Mr. Shattock asked on what character of the growth the diagnosis of Paget's disease was based.—Mr. HOPEWELL-SMITH, in reply, said that although he had been unable to demonstrate the presence of "coccidia" yet he thought that the appearance of the growth and the infiltration of the interpapillary processes with small round cells justified him in the view that the case was one of Paget's disease.

Dr. W. P. S. BRANSON in a communication on Obliterating Arteritis drew attention to the existing confusion in the use of the term. It was introduced by Friedländer in 1876 to describe obliteration of terminal arterioles in inflammatory areas, but was perverted by von Winiwarter in 1879 to the description of a lesion of main arteries to the extremities leading to gangrene. For 20 years subsequently arteritis obliterans was thus taken to mean an apparently causeless obliteration of main arteries, whether by aid of thrombosis or not. In 1896 Thoma denied that this disease had any specific identity and the literature of it practically came to an end at about this date. The definitions of arteritis obliterans offered by current text-books of pathology differed widely. Some said that a pure endarteritis was a syphilitic lesion; some that no distinction could be drawn by the microscope between syphilitic endarteritis and non-syphilitic fibrous hyperplasia; and others that an arteritis that obliterated, for whatever reason, was arteritis obliterans. There was no doubt that intimal proliferation played a prominent part in most chronic arterial lesions; it was marked in atheroma and marked in the generalised arteritis of syphilis. There seemed to be no abiding distinction except the tendency to fatty degeneration that marked atheroma. This tendency was absent in many cases of syphilitic arterial disease, but whether such an arteritis—viz., a lesion limited to the intima, widely distributed about the arterial system, but not liable to fatty metamorphosis—was a lesion peculiar to syphilis was a vexed question and he proceeded to cite a case in point. A boy, aged 12 years, under the care of Mr. H. Betham Robinson, to whom he was indebted for permission to publish the case, died after a few weeks' illness. He had come for treatment of an overgrowth of the gums but was found to have the symptoms of granular kidney and died from uræmia. His kidneys were not granular but much distorted by deep furrows, the left was about twice the size of the right, and the lower half of the latter was a mere knob of fibrous tissue. The heart was greatly hypertrophied and there was a widespread arterial lesion affecting the aorta, the cerebral, basilar, radial, and dorsalis pedis arteries, and in particular some of the terminal arterioles of the kidneys and spleen. The lesion was apparently a pure endarteritis and there was no indication of fatty changes. Microscopical examination left little doubt that the atrophy of the kidneys was anæmic in origin and depended upon arterial obliteration. In the regions of sclerosis there was some interstitial inflammation but the bulk of the remaining renal tissue in both kidneys was normal in all elements and the arteries were patent and healthy. Beyond the possible significance of two miscarriages which

had befallen the patient s mother there was nothing gained either by hearsay or by examination to suggest a family taint of syphilis Similar instances were to be found reported among the scanty records of granular kidney in childhood, the marked features of the case under discussion being very suggestively reproduced—viz an extreme disparity in the size of the kidneys, gross distortion of their outlines, and an absence of granularity A few cases circumstantially parallel were cited from medical literature but in none of them did the possible influence of syphilis appear to have been investigated He thought it fair to say that the case which he had described was something apart from granular kidney and that it represented a disease deserving more than any other the name of obliterating arteritis Though the arterial lesion in most respects resembled that as occurred with syphilis it could not be said that there was any evidence of a syphilitic origin in that particular case If it were generally agreed that the condition he had described had a specific identity no doubt the question whether or not it was attributable to syphilis would soon be settled by inquiry into the diathetic history of such cases as they occurred —Dr H D ROLLESTON said that the case recorded resembled a case described by Dr F H Hawkins some years ago before the society That case showed the same wide spread arterial change all over the body and was probably syphilitic in origin The changes in the kidney were probably secondary to the changes in the vessels With regard to granular kidney in children he thought that those which were not due to scarlet fever were to be regarded as a para syphilitic lesion and comparable to the cirrhosis of the liver which occurred in young children from a similar cause —Dr I PARKES WEBER said that one form of arterial sclerosis had escaped the observation of Dr Branson The condition referred to occurred in young individuals generally Polish Jews in whom a gradual obliteration of the vessels occurred which gave rise to gangrene for which it was necessary [illegible] He regarded this disease as [illegible] of the vessels was partly due [illegible] partly to thrombosis The symptoms of obstruction to the circulation manifested themselves suddenly Syphilis was not a cause of this condition but it was noteworthy that many of the patients had been heavy cigarette smokers —Dr G E STILL suggested that an altogether different view might be taken of the nature of the case recorded He pointed out that congenital hydrocephalus [illegible] were commonly present —Dr BRANSON in reply said that he was inclined to regard the case as due to syphilis although in the present case there was no evidence either direct or indirect pointing to such an infection The eyes had not been examined and there was no evidence of mental deficiency in the boy

Dr R S TREVOR showed a specimen of an Intra intestinal Cystic Swelling in connexion with the Ampulla of Vater The cyst was found at the necropsy on the body of a young man, aged 24 years who died from the effects of a perforated duodenal ulcer The cyst contained three ounces of bile and arose from a base measuring 1⅜ inches long by 11/16ths of an inch wide The bile duct ran down upon the outer surface of the cyst and opened upon it by a crescentic opening A probe passed into the duct of Wirsung came out at this opening thus showing that opening was the biliary orifice into the duodenum Pressure upon the gall bladder caused an escape of bile from the crescentic opening and pressure upon the cyst caused the same result thus showing that the cyst and bile duct or ampulla of Vater were connected On section of the cyst a small opening could be seen in its upper part communicating with the ampulla of Vater The cyst was lined inside and out with intestinal mucous membrane bearing villi The origin of the cyst was thought to be due to the fusion in the middle line of two folds of intestinal mucous membrane which are sometimes normally present on either side of the biliary papilla, inclosing between them beneath the papilla a fossa or cleft This explanation would account for the inner lining of the cyst with intestinal mucous membrane bearing villi the presence of which in the lining membrane of the ampulla has not been described No symptoms were attributable to the presence of the cyst

LIVERPOOL MEDICAL INSTITUTION

Conical Cornea —Plantar Reflexes —Dumb bell Calculus — Gastric Ulcer

A MEETING of this society was held on Dec 1st, Dr JAMES BARR the President being in the chair

Dr K A GROSSMANN showed a patient with Conical Cornea and demonstrated the skiascopic appearances which were particularly striking in this case owing to the high degree of the deformity, its centrally situated apex its complete transparency and the easy comparison with the other unaffected eye

Dr W B WARRINGTON read a note on the Plantar Reflexes He described the plantar reflex of the normal flexor type and the pathological extensor response He emphasized the importance in the method adopted for obtaining it and considered that only to the slow deliberate extension could a certain pathological significance be attached though other types of extension might be very significant The reflex obtained in various diseases of the nervous system was described and it was maintained that the character of the reflex was a valuable aid in distinguishing between functional and organic disease and equally so in differentiating between the different kinds of organic nervous disease —Dr F R GLYNN Dr R J M BUCHANAN and Dr J HILL ABRAM took part in the discussion

Dr W ALEXANDER exhibited a Dumb bell Calculus which he had removed from a man 43 years of age The calculus had existed for some years and a rigorous administration of solvents had no influence upon it Suprapubic lithotomy was performed a stone was removed, and the wound was closed It was then found that another stone remained behind the prostate This was removed by median lithotomy The two stones thus removed formed a dumb bell calculus The bladder was divided into two cavities with a constriction between It was found impossible to distend the bladder with lotion preparatory to the suprapubic lithotomy as when the small sac was filled contractions occurred and the urine was expelled with force alongside the catheter Dr Alexander said that the case was unique in his experience but Mr Poland in Guy s Hospital Reports for 1857 described a nearly similar case and discussed the mode of formation of such calculi —Mr RUSHTON PARKER said that the first perineal section performed by him, now many years ago on a boy about 11 years of age gave a dumb bell calculus one portion of which lay in a sac by the prostate and the other in the bladder

Dr C J MACALISTER read a paper on Some Thoughts and Suggestions concerning Gastric Ulcer He pointed out the fact that the characters of the ulcers were peculiar both as to their shape the course which they ran and their surrounding, and commented upon the unsatisfactory explanations which had been given heretofore concerning the cause of the disease By a series of lantern slides he demonstrated the characters of the simple gastric ulcer in its uncomplicated condition as distinguished from the same ulcer when secondary inflammations had taken place and he also gave illustrations of other types of ulceration and pointed out that these did not tend to be converted into the so called simple perforating ulcer In seeking for a cause of the condition it was obvious that the disease mainly attacked women and from a study of the [illegible] of events connected with the development of the [illegible] upon a toxæmia He thought this the more probable since the administration of thyroid extract frequently relieved the amenorrhœa and that following this there was sometimes great general improvement in the health of the patients Dr Macalister was emphatic concerning the necessity for taking the cases in hand during the early stages and said that whatever might be done in the way of thyroid treatment later in the disease it was necessary to use all the usual precautions as regards rest, diet

pulse was 80 per minute. There was no pain. A cover-glass preparation was made of a scraping from the black necrotic tissue in the centre of the pustule and stained with methylene blue. The anthrax bacilli were easily recognised. The diagnosis having been thus confirmed the pustule was freely excised and the wound was swabbed with a strong solution of chloride of zinc. The swelling of the arm and the lymphangitis disappeared in the course of two or three days and the patient was allowed to go home on Nov. 13th, the edges of the wound having been previously drawn together with silk sutures.

Remarks by Dr. WALLACE.—As regards the origin of the case, the man was employed by a firm of flannel manufacturers and about two months before admission he had the work of cutting the hair off a number of cattle tails. These tails came, he thinks, from Hull. On the day before admission he was lifting down a wire rack on which the hair had been placed and cut the skin of his right hand. His coat was on at the time and he is sure that he did not injure his forearm. It is possible that the bacilli gained entrance through the wound of the hand and travelling up the lymphatics were arrested in the forearm, growth taking place there.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Paget's Disease of the Gum.—Obliterating Arteritis.—Intra-intestinal Cystic Swelling.

A MEETING of this society was held on Dec. 6th, Mr. RICKMAN J. GODLEE, the President, being in the chair.

Mr. A. HOPEWELL-SMITH read a paper on Paget's Disease of the Gum. He said that this was probably the first occasion that such a disease had been noticed as affecting the oral tissues, Paget himself originally describing it in 1874 as a disease of the mammary areolæ, while Butlin, Wickham, and others had added to their knowledge of the subject. That the genitalia might suffer sometimes had been conclusively shown by Pick, Rolleston, Fordyce, and Colcott Fox, whilst MacLeod had recently reported one instance of Paget's disease of the umbilicus. In the present case the condition affected the periphery of a new growth of the jaw—a so-called "epulis"—in a patient aged 25 years. There was a history of three years' duration but no record of any obvious source of irritation or predisposing or exciting cause. The neoplasm had the appearance of a periosteal fibroma with patches of blood-red kerato-hyaline material on its smooth free surface. Sections were cut and stained with hæmatoxylin and eosine, polychrome methylene blue, and also by van Giesson's method. Microscopically there was a tendency towards desquamation of the stratum corneum and its surface was covered with kerato-hyaline masses. The cells were ballooned and many were filled with the same granular or homogeneous matrix producing in many places meniscus-like bodies, some of which measured from 3μ to 10μ. Nearer the rete mucosum many of the "spring" cells had lost their intercellular bridges and were no longer separated by inter-epithelial channels. Some of their nuclei were in a "resting" stage but the condition described by Hektoen and Riesman as hypochromatosis was present, as were also typical heterotype amphiasters, ring chromosomes and centrosomes, and other signs of asymmetric mitoses. There were some evidences of karyoclasis and even karyolysis. Darier's so-called "coccidia" and typical myeloid cells could be here and there easily discriminated. In addition, and equally important, were the cell nests pathognomonic of squamous carcinomata, some measuring as much as 25μ in length. The basement membrane was extremely irregular in outline and penetrated the cutis vera to the depth of 250μ. In several places there had been an eruption of epithelial cells through the membrane into the interpapillary spaces. Parts of the circumference of the growth were surrounded by epithelium which had become œdematous and showed signs similar to those of chronic eczema. The interpapillary processes were crowded with a small round-cell infiltration which was most marked in the neighbourhood of the cell nests and beneath the eczematous surface. The infiltration consisted, as usual, of Unna's plasma cells, some eosinophiles, a few polymorphonuclear leucocytes and lymphocytes, together with the "mast" cells of Ehrlich. In attempting to elucidate the histogenesis of this case Mr. Hopewell-Smith expressed his opinion that Cohnheim's embryonal theory fell to the ground, as did also the mechanical sequestration hypothesis of Ribbert as well as the anaplasic theory of Hansemann. There seemed to be some evidence, however, to support the views of Thiersch and Waldeyer and to corroborate the recent investigations of Farmer, Moore, and Walker. The belief of Colcott Fox and MacLeod, as expressed in a recent paper in the *British Journal of Dermatology*, was favoured by Mr. Hopewell-Smith. Mr. Hopewell-Smith, in conclusion, alluded to the great immunity of the cheek and oral mucous membrane from squamous carcinomata and emphasised the fact that all morbid tissues should be systematically examined microscopically, no matter whether for diagnostic, confirmatory, or other purposes, as new and unrecognised manifestations of disease might often be superimposed upon older, more apparent, and less malignant lesions and neoplasms.—Mr. S. G. SHATTOCK said he considered that the evidence on which Mr. Hopewell-Smith had described the case as one of Paget's disease was most unsatisfactory. The specimens of in-growing epithelium which had been shown were but a normal appearance dependent on the direction of the section. Mr. Hopewell-Smith had described but a small portion of a large tumour and from the description given it was impossible to form any opinion as to the nature of the growth. Mr. Shattock asked on what character of the growth the diagnosis of Paget's disease was based.—Mr. HOPEWELL-SMITH, in reply, said that although he had been unable to demonstrate the presence of "coccidia" yet he thought that the appearance of the growth and the infiltration of the interpapillary processes with small round cells justified him in the view that the case was one of Paget's disease.

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inherited a neurotic tendency They should be brought up in the country with a minimum of flesh food and should be educated slowly Treatment of neurasthenia should be directed (1) to lessen excitability and (2) to impart force to the nervous system Over-drugging should be avoided Every case should be examined thoroughly In this way the patient s confidence was gained Mr Lord cited some typical cases—namely (1) hysterical elbow in a boy, cured after administration of chloroform, (2) hysterical vomiting in a boy, cured by the threat of a thrashing, (3) hysterical vomiting in a woman, cured by making "passes", and (4) pseudo angina pectoris in a man, attacks of which could be brought on by suggestion —Mr R Burdett Sellers, Dr A Wallace, Mr Stanwell, and Mr G W Mahm took part in the discussion

ROYAL MEDICAL SOCIETY, EDINBURGH —A meeting of this society was held on Nov 25th at which Dr Robert Hutchison gave a lantern demonstration illustrating the Diseases of Children He commenced by showing slides of the various diseases of nutrition, such as infantile scurvy and rickets, and then went on to show various malformations of the chest Next, after exhibiting slides illustrating various congenital syphilitic conditions in children in which the unkempt state of the hair was pronounced and also some slides illustrating various rheumatic conditions he showed a very complete collection of slides of the several nervous diseases to which children are liable, and concluded with a series of slides including some beautiful examples of microcephaly and hydrocephaly, and such various conditions as sarcoma of the adrenal bodies and of the brain —Mr Alexander Miles moved, and Dr W Macrae Taylor seconded, a hearty vote of thanks to Dr Hutchison —In reply, Dr Hutchison recalled the old days when he was a senior president of the society, and concluded by emphasising the importance of a knowledge of the diseases of children in general practice —Dr A C Geddes read notes of a case of Sarcoma —Dr L H I Bell read notes of a case of Tuberculous Nephritis

GLASGOW SOUTHERN MEDICAL SOCIETY —At a meeting of this society held on Dec 1st Dr John Rowan read a paper on Some Old Books of Medicine and Surgery Amongst others, he showed and read extracts from Culpepper s Last Legacy (1656), Van Helmont (1662) whose treatment of fever, "Put him down a well and keep him there till he testineth he is cool enough, is sufficiently drastic, Frederic Dekkers (1695), and Du Verney (1737) Nature of the Organs of Hearing Many of the illustrations were reproduced as lantern slides and greatly increased the interest of the paper Dr Rowan also showed Wesley s Book of Treatment and specially called attention to his advocacy of electricity in no fewer than 45 diseases This seemed quite modern

NEWPORT MEDICAL SOCIETY —A meeting of this society was held in the Newport and County Hospital on Nov 30th, Dr T Morrell Thomas, the President being in the chair Several interesting clinical cases were exhibited and discussed, and the President read an address on the Complications and Sequelæ of Influenza The paper described in a systematic manner the affections of the pulmonary, circulatory, and nervous systems, and of the eye ear, skin, and so on, which the speaker had himself seen following attacks of influenza

Reviews and Notices of Books.

The Principles of Hygiene a Practical Manual for Students Physicians, and Health Officers By D H BERGEY M D, Assistant Professor of Bacteriology, University of Pennsylvania Illustrated Second edition London Philadelphia and New York W B Saunders and Co 1904 Pp 536 Price 13s net

WITHIN conditions, the definition that "hygiene aims to make growth more perfect life more vigorous, decay less rapid, death more remote,' may be accepted This at least sets before us a high and even ideal goal At the outset in this work we are made conversant with one hygienic factor—viz, good print, good paper, and short lines The strain on the visual mechanism of following a long line of print across a page is severe It is not so in this work moreover, the difference of type accentuates the salient features *Per contra*, the division of words as regards their origin is sometimes neglected It is not enough to establish a proposition to give the *obiter dicta* of the "late Professor J G Richardson" relative to persons of sanguine temperament Such persons had better not read the Professor s forecast The first chapter deals with "Air" on broad and useful lines Are we to reconcile ourselves to "dioxid, 'fibers," "liters, "disulphid "hemoglobin," and 'sulphid ? Well, letters are saved The late Lord Justice Cockburn called attention to the saving of time in the pronunciation of a certain word by omitting one syllable A non-diffident and witty barrister later in the case, suggested that his lordship s pronunciation of the word "omnibus" might be cut down to 'bus' and thus save two syllables Ventilation and heating are next tersely treated Water supply and sewage are fully dealt with reference being made to the experience of continental and American communities The chapters on Food, Diet Exercise, Clothing, and Personal Hygiene are practical and to the point and are not overladen with detail Industrial, school, military, and naval hygiene are discussed separately and the examples of the two latter subjects are taken, of course largely from the observations made in America Vital causes of disease, the nature of epidemics, and immunity are passed in review Much stress is laid on the means to prevent yellow fever and malaria In these days when the medical officer of health of the City of London is endeavouring to obtain better cleanliness in barbers' shops it is interesting to note that in greater New York rules for the governance of barbers have already been in operation and similar rules have been adopted in New Orleans and other cities A very long chapter is devoted to the laws relating to quarantine in the United States

The work is well written, full of facts, and not over crowded with minutiæ so that the great principles stand out in bold relief Its perusal will help to broaden the reader s views of the national and international importance of hygiene in the truest sense of the word

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Beitrage zur Wissenschaftlichen Medicin und Chemie (Contributions to Scientific Medicine and Chemistry) "Festschrift in Honour of the Sixtieth Birthday of ERNST SALKOWSKI With one Portrait and two Plates Berlin Hirschwald Pp 480 Price 12s

GERMANY is the land of "Festschrifts" When any distinguished teacher reaches a certain age it is usual for his pupils to print in his honour and to present him with such a galaxy of original papers as serve to make a goodly volume From numerous pupils, friends, and colleagues we find 46 original papers written in honour of one who has done much to advance physiological and pathological chemistry The papers are upon the most diverse subjects and their titles alone occupy three pages Beginning with E von Leyden we have a short paper on the crystals that bear his name jointly with that of Charcot There are papers in English by E P Cathcart on Urotryptic Digestion, and on Bile Pigment by W R Orndorff and Teeple from America, and in German on Sugar Estimation and on Beri beri by Kumagawa Suto and Yamagiwa of the University of Tokio Naturally most of the contributions are from German colleagues and deal with many chemico-physiological questions—e g, the occurrence of heteroxanthin indol, phenol, and glycuronic acid in urine excretion of purin bases estimation of indol in fæces by a colorimetric method, oxidation and decomposition in living matter (H Friedenthal) origin of glucose from other sugars, chlorides in nephritis action of cobra poison (M Jacobs), excretion of aromatic bodies in cancer (C Lewin), oxalic acid excretion and glycosuria (Luzzatto of Padua) metabolism of phosphorus, pyrol reaction, a new test for cholesterin (C

and palliative treatment in addition.—The PRESIDENT, Dr. E. T. DAVIES, Mr. E. M. STOCKDALE, Dr. W. CARTER, Dr. T. R. GLYNN, Dr. T. R. BRADSHAW, Dr. HILL ABRAM, Dr. E. E. GLYNN, and Dr. R. J. LOGAN took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Elephantiasis.—Cancer of both Ovaries.—Fibro-myomata.

A MEETING of this section was held on Nov. 18th, Professor A. J. SMITH, the President, being in the chair.

Mr. A. J. HORNE showed a case of Elephantiasis of the Leg and Vulva.

Dr. W. J. SMYLY showed a specimen of Cancer of both Ovaries. The patient, who was 66 years of age, ceased to menstruate at 54. In April last there was a slight red discharge which ceased but came on again in three months. Scrapings from curetting were benign. A small tumour could be felt on each side of the uterus. In November a large ovarian cystoma had formed. The uterus and both ovaries were removed by Doyen's method.

Mr. HORNE opened a discussion on the Influence of Fibromyomata on Pregnancy and Parturition.

Dr. SMYLY said that the general impression was that women with fibroids were less likely to conceive than others, but these women were generally sterile long before. The cause of sterility appeared to be the condition of the mucous membrane. Another point was that these women went on bearing children to a later period in life than others, and it was attributed to ovulation and menstruation going on to a later period. His own experience did not either support or contradict these opinions. He thought that these tumours did not often cause obstruction during labour, even when growing low down in the pelvis, as they were usually drawn up out of the way. The chief danger of myomata was during the puerperium. Portions of the membranes were sometimes retained in these cases and by decomposition caused sepsis. Retained placenta was also common. He did not agree with Mr. J. Bland-Sutton that all myomata should be removed, though the risk of operation was not great.

Dr. R. D. PUREFOY said that the influence of fibroids in causing sterility was over-rated. An interesting aspect of the question was the greatly increased difficulty in diagnosing pregnancy in the first three months. A fibroid in the uterine wall enfeebled the uterine contractions and they often caused a interference with the course of labour. He related a case of a primipara, 30 years of age, with a fibroid in the lower uterine segment. She went five weeks beyond full term. The presenting part could not be reached and there was a complete absence of labour. The uterus was removed along with the child and the patient made a good recovery. He thought that myomectomy was only advisable in the early months of pregnancy. The occurrence of pregnancy rather hastened the development and increased the size of these tumours.

Mr. E. H. TWEEDY related a case in which he had removed the uterus at the fifth month as the patient could not have gone to full term. As to fibroids causing sterility, he said it was not the fibroids but the endometritis that caused it in a certain number of cases. If there was a subperitoneal myoma it would not cause endometritis and there would be no sterility.

Dr. F. W. KIDD agreed as to the difficulty of diagnosing pregnancy in the early months when associated with myomata. As to sterility, he thought the question was one of comparative and not absolute sterility. He related a case of a primpara, 44 years of age, with two large tumours at the fundus. They caused transverse presentation, and version was performed. The placenta had to be removed manually. The patient made a good recovery. He had examined her since and found that the tumours had entirely disappeared. When pregnancy was complicated by cancer the cancer usually increased rapidly owing to the hyperæmia. He thought that the same increase usually occurred in the case of other tumours in similar circumstances.

Dr. H. JELLETT said that another aspect of the question was the effect of myomata on the life of the fœtus during the last months of pregnancy. Quite recently he had had a case in which death of the fœtus in utero apparently resulted from a myoma of the fundus.

The PRESIDENT related two cases. The first patient had a large fibroid tumour of the size of an eight months pregnant uterus. There were no urgent symptoms, but there was no room for a pregnant uterus along with the tumour. He removed the tumour and the following year the patient was delivered of a full term child and had had four children since. The second case was one of a six months pregnancy complicated by a large fibroid tumour. There were great distress and dyspnœa and the tumour was removed along with the pregnant uterus. This was another example of the danger of a large fibroid tumour in pregnancy.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary on Nov. 15th, Mr. C. F. M. Althorp, the President, being in the chair.—Dr. A. Bronner showed:—1. A case of Brain Abscess opened through the Tegmen Tympani. The remarkable feature of the case was that although at the time of operation there was no bulging of the dura mater and although the opening made was very small still there was a considerable hernia cerebri afterwards. 2. A case of Foreign Body in the Eye removed by the giant magnet.—Dr. A. C. F. Rabagliati showed a case of Tuberculous Synovitis of the Right Knee-joint in a boy, eight years of age, cured by monositeism continued for six months, and also read a paper on an Entirely New Suggestion as to the Part played by Food in the Human Economy.—The paper was discussed by Dr. H. Angus, Mr. P. E. Miall, Mr. W. H. Thompson, Dr. T. W. Hime, Mr. R. Mercer, and Dr. F. W. Eurich.—Dr. Rabagliati replied.—Dr. Eurich read notes on two cases to illustrate Some Points in the Diagnosis of Hysteria. 1. A case published as one of hysteria by Dr. Arthur J Hall in the *Quarterly Medical Journal*, August, 1900. After an injury received in boyhood which necessitated trephining, the patient suffered from periodic attacks of right-sided weakness with rigidity and occasional epileptiform seizures and clonic twitchings combined with stupor and mental impairment, which attacks were accompanied, and probably caused, by increased intraventricular pressure. Four days after admission the patient was trephined by Mr. Althorp, the ventricles being drained. Death occurred from cerebritis nine days later. The post-mortem examination showed chronic internal hydrocephalus with patches of disseminated cerebritis. Dr. Hall's diagnosis of hysteria was criticised. 2. A case of Ganser's Hysterical Stupor in a girl, aged 23 years. The patient had a hysterical fit on receipt of a telegram and a letter informing her of the death of a brother. Her memory was impaired especially for dates and figures but for names it was good. The reaction time was slowed. Periods of submaniacal excitement followed with a few visual hallucinations. The patient refused food. There was hemianæsthesia of the trunk and the right leg. It was discovered that the telegram and letter were sent by herself. Becoming too noisy and troublesome in hospital she was sent to her home in the south, *en route* for an asylum. The treatment, especially the question of hospital treatment and the drawbacks of asylum life for such cases, was discussed. (Since the paper was read Dr. Eurich has heard that the patient made a rapid recovery at her own home.) The paper was discussed by Dr. Rabagliati, Dr. Angus, Mr. Mercer, and Dr. Hime.—Dr. Eurich replied.—On Nov. 23rd the annual dinner of the society was held at the Midland Hotel, when Dr. J. Rose Bradford of University College, London, read a paper on Errors in Diagnosis before a very large and appreciative audience.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Dec. 1st.—Dr. J. Melvin read notes of a case of Epidemic Cerebro-spinal Meningitis. The patient, a woman, aged 38 years, had been nursing a case of typhoid fever. The onset was sudden, with vomiting and a temperature of 102° F., which was the highest temperature recorded throughout the case. Various rashes developed. Patches of erythema occurred irregularly; there were bullous eruptions and at one time a few spots resembling those of typhoid fever. Examination of the blood was negative as regards typhoid fever. The patient rested on the left shoulder with the legs drawn up. There was slight retraction of the head. Other symptoms were delirium and hyperæsthesia to touch but not to light or sound. Recovery took place.—Mr. W. Stanwell and Mr. S. T. Lord expressed the opinion that the case was one of typhoid fever complicated by meningitis.—Mr. Lord read a paper on the Treatment of Neurasthenia and Allied Diseases. He advocated prophylaxis in children who

inherited a neurotic tendency They should be brought up in the country with a minimum of flesh food and should be educated slowly Treatment of neurasthenia should be directed (1) to lessen excitability and (2) to impart force to the nervous system Over-drugging should be avoided Every case should be examined thoroughly In this way the patient's confidence was gained Mr Lord cited some typical cases—namely (1) hysterical elbow in a boy, cured after administration of chloroform, (2) hysterical vomiting in a boy, cured by the threat of a thrashing, (3) hysterical vomiting in a woman, cured by making 'passes", and (4) pseudo angina pectoris in a man, attacks of which could be brought on by suggestion —Mr R Burdett Sellers, Dr A Wallace, Mr Stanwell, and Mr G W Malim took part in the discussion

ROYAL MEDICAL SOCIETY, EDINBURGH —A meeting of this society was held on Nov 25th at which Dr Robert Hutchison gave a lantern demonstration illustrating the Diseases of Children He commenced by showing slides of the various diseases of nutrition, such as infantile scurvy and rickets, and then went on to show various malformations of the chest Next, after exhibiting slides illustrating various congenital syphilitic conditions in children in which the unkempt state of the hair was pronounced and also some slides illustrating various rheumatic conditions he showed a very complete collection of slides of the several nervous diseases to which children are liable and concluded with a series of slides including some beautiful examples of microcephaly and hydrocephaly, and such various conditions as sarcoma of the adrenal bodies and of the brain —Mr Alexander Miles moved, and Dr W Macrae Taylor seconded, a hearty vote of thanks to Dr Hutchison —In reply, Dr Hutchison recalled the old days when he was a senior president of the society, and concluded by emphasising the importance of a knowledge of the diseases of children in general practice —Dr A C Geddes read notes of a case of Sarcoma —Dr L H I Bell read notes of a case of Tuberculous Nephritis

GLASGOW SOUTHERN MEDICAL SOCIETY —At a meeting of this society held on Dec 1st Dr John Rowan read a paper on Some Old Books of Medicine and Surgery Amongst others, he showed and read extracts from Culpepper's Last Legacy (1656), Van Helmont (1662) whose treatment of fever, "Put him down a well and keep him there till he testineth he is cool enough, is sufficiently drastic, Frederic Dekkers (1695), and Du Verney (1737) Nature of the Organs of Hearing Many of the illustrations were reproduced as lantern slides and greatly increased the interest of the paper Dr Rowan also showed Wesley's Book of Treatment and specially called attention to his advocacy of electricity in no fewer than 45 diseases This seemed quite modern

NEWPORT MEDICAL SOCIETY —A meeting of this society was held in the Newport and County Hospital on Nov 30th, Dr T Morrell Thomas, the President being in the chair Several interesting clinical cases were exhibited and discussed and the President read an address on the Complications and Sequelæ of Influenza The paper described in a systematic manner the affections of the pulmonary, circulatory, and nervous systems and of the eye ear, skin, and so on, which the speaker had himself seen following attacks of influenza

Reviews and Notices of Books.

The Principles of Hygiene a Practical Manual for Students Physicians and Health Officers By D H BERGEY M D, Assistant Professor of Bacteriology, University of Pennsylvania Illustrated Second edition London Philadelphia and New York W B Saunders and Co 1904 Pp 536 Price 13s net

WITHIN conditions, the definition that 'hygiene aims to make growth more perfect, life more vigorous, decay less rapid, death more remote,' may be accepted This at least sets before us a high and even ideal goal At the outset in this work we are made conversant with one hygienic factor—viz, good print, good paper, and short lines The strain on the visual mechanism of following a long line of print across a page is severe It is not so in this work, moreover, the difference of type accentuates the salient features *Per contra*, the division of words as regards their origin is sometimes neglected It is not enough to establish a proposition to give the *obiter dicta* of the "late Professor J G Richardson" relative to persons of sanguine temperament Such persons had better not read the Professor's forecast The first chapter deals with Air' on broad and useful lines Are we to reconcile ourselves to "dioxid,' 'fibers," "liters, "disulphid "hemoglobin, and "sulphid'? Well, letters are saved The late Lord Justice Cockburn called attention to the saving of time in the pronunciation of a certain word by omitting one syllable A non-diffident and witty barrister later in the case, suggested that his lordship's pronunciation of the word "omnibus" might be cut down to bus and thus save two syllables Ventilation and heating are next tersely treated Water supply and sewage are fully dealt with, reference being made to the experience of continental and American communities The chapters on Food, Diet Exercise, Clothing, and Personal Hygiene are practical and to the point and are not overladen with detail Industrial, school military, and naval hygiene are discussed separately and the examples of the two latter subjects are taken, of course largely from the observations made in America Vital causes of disease, the nature of epidemics, and immunity are passed in review Much stress is laid on the means to prevent yellow fever and malaria In these days when the medical officer of health of the City of London is endeavouring to obtain better cleanliness in barbers' shops it is interesting to note that in greater New York rules for the governance of barbers have already been in operation and similar rules have been adopted in New Orleans and other cities A very long chapter is devoted to the laws relating to quarantine in the United States

The work is well written, full of facts, and not over crowded with minutiæ so that the great principles stand out in bold relief Its perusal will help to broaden the reader's views of the national and international importance of hygiene in the truest sense of the word

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Beitrage zur Wissenschaftlichen Medicin und Chemie (Contributions to Scientific Medicine and Chemistry) "Festschrift in Honour of the Sixtieth Birthday of ERNST SALKOWSKI With one Portrait and two Plates Berlin Hirschwald Pp 480 Price 12s

GERMANY is the land of "Festschrifts" When any distinguished teacher reaches a certain age it is usual for his pupils to print in his honour and to present him with such a galaxy of original papers as serve to make a goodly volume From numerous pupils friends and colleagues we find 46 original papers written in honour of one who has done much to advance physiological and pathological chemistry The papers are upon the most diverse subjects and their titles alone occupy three pages Beginning with E von Leyden we have a short paper on the crystals that bear his name jointly with that of Charcot There are papers in English by E P Cathcart on Urotryptic Digestion, and on Bile Pigment by W R Orndorff and Teeple from America, and in German on Sugar Estimation and on Beri beri and in German on Sugar Estimation and on Beri beri by Kumagawa Suto and Yamagiwa of the University of Tokio Naturally most of the contributions are from German colleagues and deal with many chemico-physiological questions—e g, the occurrence of *heteroxanthin*, indol, phenol, and glycuronic acid in urine, excretion of purin bases, estimation of indol in fæces by a colorimetric method oxidation and decomposition in living matter (H Friedenthal) origin of glucose from other sugars, chlorid s in nephritis, action of cobra poison (M Jacoby), excretion of aromatic bodies in cancer (C Lewin), oxalic acid excreta and glycosuria (Luzzatto of Padua) metabolism of phosphorus, pyrol reaction a new test for choles

Neuberg), occurrence of protagon-like body in the suprarenal capsule (Orgler), catalysis, metabolism during hunger in lizards, indiguria, ferments in the hen's egg, and the formation of succinic acid in Liebig's extract of meat. There are a few clinical and pathological papers dealing with pericarditis, cachexia of cancer, diabetes insipidus, euphorin as an expectorant, metabolism in obesity, combination of precipitin and albumin, and agglutinin receptors. These serve to show the variety of the subjects dealt with in this "Festschrift" in contributions by representatives of various nationalities in honour of one whom they justly regard with respect and hold in honour.

Lehrbuch der Physiologie. (*Manual of Physiology.*) By L. HERMANN. Thirteenth edition, with 245 figures. Berlin: Hirschwald. 1905. Pp. 763. Price 16*s.*

THE first edition of this work appeared 42 years ago when physiology under J. Müller, du Bois Reymond, Brücke, Helmholtz, and Ludwig first began to be an exact science. Most properly the author lays great stress upon the importance of a proper training in physics before the student attacks the problems of physiology. Of histology there is little, as in most German books on physiology. After an admirable and terse *résumé* on physics as applied to physiology there is an equally lucid review of the general chemical constitution of the body. Then commences the description of the motor organs of the body, preceded by a short historical account of the cell and its functions. We find fully set forth Professor Hermann's view as to the analogy, if not identity, of muscular contraction and rigor (p. 173). After the general physiology of muscle there is a special chapter on Movements of Joints and Special Muscular Acts, including the Production of Voice and Speech. Professor Hermann's own researches on the production of vowels and consonants are fully set forth. Indeed, this part is more fully dealt with than is usual in English text-books. The physiology of nerve is, of course, very fully discussed, and so are electro-motive phenomena, as was naturally to be expected on the part of one who has done so much by his own researches to shed light on these subjects and to banish the theories of one who was his master. The study of the central nervous system and the senses bulks largely (pp. 249-459). Unfortunately, some of the schemata are rather small and crowded to one side of a page. Larger ones would have been better.

The third section deals with nutrition and animal heat. The chapter on the Nature of the Heart Beat is full of facts and critical observations. The newer nomenclature of Engelmann is introduced. In connexion with the pulse we find less of sphygmometers than is usual in English text-books; three mentioned bear the names of von Basch, Riva-Rocci, and Mosso and are extensively used on the continent. No diagram is given to show the structure of the apparatus. Respiration, digestion, secretion, and temperature are successively discussed. With regard to lymph formation there is also less given than in some of our own text-books. The account of blood formation suffers from the want of sufficient illustrations. Animal heat is excellently done, as was to be expected from so distinguished a physicist as Professor Hermann. While to English readers the diagrams and woodcuts are not so good as in our own text-books, it would be difficult to pack into so many pages such an array of facts, doctrines, short summaries, historical sketches, and sharp criticisms as has been done in this volume. Perhaps the very concentrated pabulum makes it rather difficult reading—or at least difficult of absorption. It is a compact and extensive storehouse which may be consulted with the certainty of finding a reference to even the most occult matters in physiology. We wish the veteran Professor Hermann many days of activity and welcome this the latest product of his untiring energy and marvellous skill in collecting, collating, and marshalling facts and doctrines.

Aids to the Study of Sanitary Law. By HARRY CRITCHLEY, M.A., D.P.H., &c. Students' Aid Series. London: Baillière, Tindall, and Cox. 1904. Pp. 81. Price, cloth, 2*s.* 6*d.*; paper, 2*s.*

THE recognised legal text-books upon the law relating to the public health are bulky volumes, necessarily containing all the Acts of Parliament referring to all branches of the subject and the cases decided under their various sections. The possession of such books for the purpose of reference is indispensable to those charged with carrying out the law, because in the administration of justice in quasi-criminal matters technical accuracy is rightly enforced, but in order that a student may obtain a general idea of the powers of a sanitary authority he will hardly be required to master the books of Mr. Glen or Mr. Lumley, and they are not works which can usefully be glanced through in order to obtain a general idea of their subject matter. It is for the benefit of the student reading for his examination rather than for that of the medical officer of health seeking to inform himself as to his powers with reference to a concrete case arising in the exercise of his duties that Mr. Critchley has compiled a little volume containing a good deal of information in a small compass and in a readable form. It might have a wider sphere of usefulness before it and be of service to medical officers of health and to others in the employment of sanitary authorities if it were on a slightly larger scale and contained references to all the sections from which abstracts are made or which, more frequently, are paraphrased in it. It might then be carried in the pocket as a means to refresh its owner's memory and students also might find it more convenient if they could turn from it to study the full wording of a particular section without having to hunt for it first. The author gives as his reason for not quoting the Acts relating to vaccination that the law upon this subject is in "an uncertain condition." This hardly seems a good reason for not setting out the provisions of Acts which are quite as definite as many others and pointing out where uncertainty may, in the author's opinion, exist. The original period of the most recent Act dealing with vaccination has expired but it is as likely that it will be renewed from year to year by the annual Expiring Laws Continuance Act as that the Government will carry through fresh legislation upon a thorny subject under the present political conditions.

LIBRARY TABLE.

Spemann's Historischer Medicinal-Kalender. Compiled by Professor PAGEL and Professor SCHWALBE. Stuttgart: Spemann. 1905. Price 2*s.*—We strongly recommend every medical man to obtain a copy of this calander even if he does not understand German. Almost every second page has an illustration of some picture, bronze, print, or medal on some subject dealing with medicine. The subjects are chosen from Teniers, Dürer, Jan van Eyck, Mierevelt, and Rembrandt, the subjects themselves being remarkably quaint. We have nothing like it in this country. The text for each day treats of discoveries or facts in relation to medicine, with pithy extracts from celebrated authors.

The Hygiene of Bird Keeping. By W. GEORGE CRESWELL, M.D. Durh., F.Z.S. Kingston-on-Thames: R. G. Clement. Price 1*s.* net.—This little book will be welcomed by all lovers of birds, whether ornithologists, aviculturists, or the owners of a single pet songster. The author deals with his subject in a thoroughly practical and scientific manner and the results of his experiments prove the fallacy of som

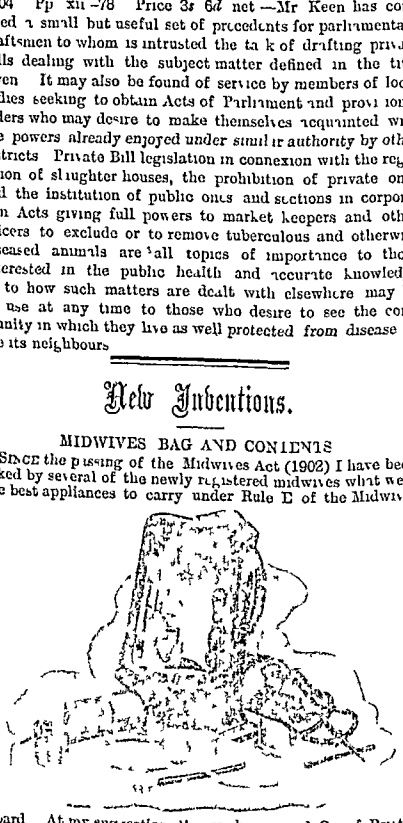
rule-of-thumb theories of the bird dealer For instance Dr Creswell shows that under proper conditions canaries can be kept out of doors throughout the winter with decided advantage to their health and also to their breeding capabilities In treating of the construction of aviaries the author, while not subordinating a practical purpose to designs which please the eyes has nevertheless managed to make some able suggestions for building aviaries of artistic merit The question of the feeding of birds is also dealt with and the experiments in hybridization are as interesting as they are useful It is satisfactory to see that attention is called to the thoughtless practice of hanging birds in cages just above the level of the sashes of windows and to the mistaken kindness of hanging a cage in a corner of a sitting room or a kitchen near the ceiling In the one case the bird is subjected to draughts and will in all probability develop catarrh and bronchitis and in the other it lives in a vitiated atmosphere The book is well illustrated

Markets Fairs and Slaughter houses, being a Collection of Special Provisions relating to Markets, Fairs and Slaughter houses contained in the Private Acts of Parliament and Provisional Orders obtained by English Provincial Corporations and Urban District Councils in the Years 1901 1902 1903 Compiled and arranged by FRANK NOLL KEEN of the Middle Temple, Barrister at law London P S King and Son 1904 Pp xii -78 Price 3s 6d net —Mr Keen has compiled a small but useful set of precedents for parliamentary draftsmen to whom is intrusted the task of drafting private Bills dealing with the subject matter defined in the title given It may also be found of service by members of local bodies seeking to obtain Acts of Parliament and provisional orders who may desire to make themselves acquainted with the powers already enjoyed under similar authority by other districts Private Bill legislation in connexion with the regulation of slaughter houses, the prohibition of private ones and the institution of public ones and sections in corporation Acts giving full powers to market keepers and other officers to exclude or to remove tuberculous and otherwise diseased animals are all topics of importance to those interested in the public health and accurate knowledge as to how such matters are dealt with elsewhere may be of use at any time to those who desire to see the community in which they live as well protected from disease as are its neighbours

New Inventions.

MIDWIVES BAG AND CONTENTS

SINCE the passing of the Midwives Act (1902) I have been asked by several of the newly registered midwives what were the best appliances to carry under Rule E of the Midwives

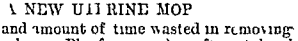


Board At my suggestion Messrs Herris and Co of Bristol have put together a very useful bag and contents which, I consider, cover all that is necessary The bag is made of strong black leather, having a moveable lining for washing purposes The contents are as follows four bottles in wooden cases for (1) liquid extract of ergot, (2) aromatic spirit of ammonia (3) permanganate of potassium crystals, and (4) boric lotion, minim measure, female catheter, enema syringe, clinical thermometer scissors, nail brush and antiseptic soap in case vaginal douche antiseptic cotton wool, and soft soap with iodide of mercury and carbolised ointment The cost of the bag is two guineas

Upper Pontnewydd ALFRED W HAYLES

A NEW URETHRAL MOP

THE difficulty and amount of time wasted in removing the wool from the ordinary Playfair's probes after it has been used led me to try to devise some means by which the mop might be more easily and quickly removed It occurred to me that a cap of some absorbent material which would fit over a conical probe would serve the purpose and such a cap or mop I have had made this slips over a conical or tapering metal probe and is held in position by a small bayonet catch which effectually prevents it from twisting round or leaving the probe The dry mops weigh 13 grains (0 79 gramme),



after being used they weighed 39 grains (2 5 grammes), they are therefore sufficiently absorbent for the purpose The advantages over the ordinary Playfair's probe are (1) ease and rapidity of dressing the probe (2) ease and rapidity of removing the mop after use, (3) both mops and probes are easily sterilised and (4) the tapered part of the probe being made of plated copper can be bent to any desired shape The caps are put up in sterile ed packets of four or they may be had separately but not sterilised

Both probe and caps were made for me by the Galen Manufacturing Company Limited Wilson street New Cross road London S E and my thanks are due to them for so successfully carrying out my suggestions

Stratford place W S JERVOIS AARONS

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM —The annual dinner of this society was held at the Trocadéro Restaurant London on Dec 5th, Dr Thomas Barr being in the chair Amongst those present were Sir R Douglas Powell Sir J Barlow, Sir Felix Semon Dr F Roberts Mr F Mark Hovell Dr U Pritchard Dr N I C Farrar Dr J Dundas Grant Dr Dawson Williams Mr C A Ballance Dr G Taylor Guild Dr H Tilley Dr H Jones Dr W Jobson Horne and Mr G R Sims After the toast of The King had been duly honoured Sir Douglas Powell proposed The Otological Society He said that the important point was to make the work of the society as clinical and practical as possible It was the labyrinthine character of the organ of hearing that rendered it essential that it should be the specialty of men who devoted their whole attention to the diagnosis and treatment of its affections The chairman in responding said that the society had done good work for the last five years *He hoped to see the institution of* organised and systematic research in connexion with the society He believed that if anyone were prepared to enter into research work in regard to the ear the necessary money would be *forthcoming* He suggested that a permanent museum for otology should be founded in London Mr Ballance proposed the toast of The Guests and strongly urged the full recognition by the great London hospitals of the claims of aural surgeons, it was only prejudice and ignorance that prevented this being done He concluded by eulogising the work of the most prominent guests present and described Mr Sims as the representative of the eternal struggle between right and wrong and congratulated him on possessing a spoon of sufficient length and strength to be able to sup with credit with the devil of official inertia Dr Farrar responded for the guests as did Mr Sims who observed that the public did not yet appreciate and were not likely to appreciate the work of the society Everyone sympathised with the blind man but laughed at a deaf man When he was a doctor he found that an audience could always be roused to mirth by a deaf man whilst a blind man made them inclined to weep To Dr Pritchard was intrusted the toast of The President of the Society Dr Barr, and after that gentleman had acknowledged the compliment he concluded by proposing the health of the two honorary secretaries *Dr Tilley and Dr Jones*

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

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MONDAY, NOV. 28TH.

THE Council met again to-day, Sir WILLIAM TURNER, the President, being in the chair.

Report on the Final Examinations of the University of Edinburgh.

The first business was the consideration of the report by the Examination Committee on the report by the visitor and inspector of examinations (Sir George Philipson and Mr. Thomas Bryant) on the final examinations in medicine, surgery, and midwifery of the University of Edinburgh. This report was formally received and entered on the minutes on Saturday.

Sir PATRICK HERON WATSON moved that the report and recommendation therein contained be adopted. He read the report as follows:—

The Examination Committee have experienced unusual difficulty in their consideration of this report by the visitor and inspector, partly aboration of the examination arrangements at because the visitor and inspector do not always [illegible] on one section of the examination at the part of the report in which that section is mainly described.

Your committee have endeavoured to simplify the arrangement of their report as far as possible, although this requires a good deal of reference backwards and forwards in the pages of the report of the visitor and inspector.

REPORT ON THE WRITTEN EXAMINATION IN MEDICINE, SURGERY, MEDICAL JURISPRUDENCE AND MIDWIFERY.

The visitor and inspector report that the questions were suitable and that the estimation of the answers was equitable.

ORAL EXAMINATIONS.

Medicine.—This examination the visitor and inspector state was excellent and "well adapted to elicit the knowledge and attainments of the candidates and the estimation of the value of the answers of the candidates was reviewed with great care and discrimination," and in it the visitor and inspector concurred.

Jurisprudence and Public Health.—The visitor and inspector saw two candidates examined. They describe the specimens and models placed on the table. No opinion is expressed by the visitor and inspector as to the standard of this examination. Both the candidates got marks under 59 per cent. In this the visitor and inspector concurred.

Surgery.—Pathological specimens, casts, photographs were freely used. No opinion is expressed as to the standard of this examination and no opinion is given regarding the estimation of the students' answers, whether these were over-marked or not.

Midwifery.—Pathological specimens, instruments and appliances, fœtal skulls, normal and abnormal pelves, a phantom and mannikin, and casts of heads of fœtal skulls were shown. The visitor and inspector state that the examination was excellent and that they concurred in the marks awarded.

CLINICAL EXAMINATIONS.

Medicine.—Each candidate had to write a full clinical report of one case and to write at least two prescriptions. The urine had to be examined. Two hours were allowed. For the written report 80 was the maximum and for the prescriptions 20 additional marks were given = 100. The visitor and inspector state: "The majority of these reports were highly creditable, systematically arranged, carefully written, and correct in spelling. In some the symptoms and physical signs were given very fully, in others in a more restricted manner. The diagnosis in general appeared to be correct." The prescriptions also were generally appropriate. Subsequently the candidates were examined orally in clinical medicine and for this examination 70 marks were given for the bedside examination of a case and 12 marks for skin cases, and 18 marks for urine and microscopic examination = 100 the maximum marks. Regarding this oral examination the visitor and inspector state that it was comprehensive in every particular, conducted with order and precision, and was calculated to elicit the practical knowledge and attainments of the candidates in manipulative medicine generally, with the interpretation of symptoms and physical signs. The manner and mode of interrogation and demeanour of the candidates to the patients were deserving of commendation. The marks allotted were, in the opinion of the visitor and inspector, a just estimate of the knowledge and answers of the candidates.

Clinical gynæcology.—The visitor and inspector report that this examination was carefully arranged, admirably conducted, and most valuable in estimating the practical knowledge of the candidates in diagnosis and treatment, instrumental and operative. The marking was, in the opinion of the visitor and inspector, a just estimate.

Clinical surgery.—As in medicine, this also began by the candidate reporting in writing a case at the bedside, for which an hour was allowed, and the maximum value of which report was 30 marks. The visitor and inspector state that generally the reports by the candidates were systematically arranged and written with care. In some the diagnosis was well reasoned out and differentiated, while the prognosis and treatment, operative and medicinal, were equally well reviewed and concisely stated. The marking was in accordance with the required standard. After this written case the candidate was examined orally and the oral examination was divided into three sections, A, B, and C.

The visitor and inspector state as to Part A "that each candidate was given a case which had been previously selected in the examination ward to examine and briefly report. For this he was allowed 15 to 20 minutes. Upon this case he was subsequently examined ten or more minutes and the case, when skilfully used as a text, brought out more or less of the candidate's knowledge." As this committee is unable to understand what the visitor and inspector intend to convey in this paragraph the committee leaves it to the Council.

Part B is stated by the visitor and inspector to comprise "the examination upon two previously assigned operations—in surgical anatomy and surgical procedure." These "operations," according to the visitor and inspector, consisted only in skin markings of lines of incisions. The candidate also was questioned in surgical anatomy and surgical procedure on the same patients. All this is stated to have been carried on in a ward to which the patients' friends and visitors, male and female, were freely admitted, and thus exposure of any part of the patient's body was inadequate or impossible. It is further stated that "no attempt was made practically to get out of any candidate any precise knowledge of the relation of an artery or nerve beyond what book knowledge would have given him." The visitor and inspector add: "The examination was so unsatisfactory that we [they] were enabled to realise the truth of the adverse criticisms we [they] have heard of this method of examination in a way which we [they] never before believed to have been possible." The faculty of the University do not dispute the presence of strangers in the wards but they affirm that screens were put round the beds of the patients during examination when that was necessary. This committee is of opinion that statements so strongly adverse by the visitor and inspector should have been supported by detailed instances of inefficiency of examination methods. The medical faculty of the University do not admit the accuracy of the statements of the visitor and inspector and from notes furnished by the examiners the faculty is satisfied that the examination in surgical anatomy was not only appropriate but also of a very searching and practical kind. Further, the faculty states that the present inspector, when reporting on the clinical surgical examination in Edinburgh University in 1894 with Sir George Duffey, said: "The entire examination in clinical surgery was a most complete, searching, and practical one." The Faculty states that "the examination is conducted on precisely the same lines," so far as method is concerned, and is improved in accordance with recommendations of the visitor and inspector made at that time.

Part C of the clinical oral examination was on surgical instruments and the visitor and inspector state that it was "fairly satisfactory." In addition to the written, oral, and clinical examination in surgery, there is also the practical examination in bandaging, the treatment of fractures and dislocations, and operative surgery. The visitor and inspector state that only one out of six candidates is required to do an operation, owing to want of material, and they further state that he is selected from the men who were above the average—"the good men were taken on the operations on the dead body." The visitor [illegible] selection is m[illegible] the visitor and [illegible] required of a ca[illegible] operations upon the cadaver usually are, but at Edinburgh more operations were not possible for reasons well known (the want of material), but we feel assured that a good examiner with full knowledge of surgical anatomy could, in the time occupied by a student in getting through this operation with success or otherwise, spend that time, or even half of it, with much greater success as an examiner and advantage to the candidate, by testing upon a muscular but not fat living subject, lightly covered, and placed in a horizontal position, the candidate's knowledge of surgical anatomy, of his methods of examining sick people, of recognising or reducing dislocation and fractures and, not less, his knowledge of operations even by the employment of chalk lines, when such are put in with knowledge of the nature of deeper parts and with brains."

Concerning the five men who did not get an operation to do the visitor and inspector report: "We were present when much of this work was carried out and we were well satisfied that the examination was a good one. The candidates' answers to questions and the way they did their work were not satisfactory and out of a batch of five no one obtained a B mark. The variety of splints and mechanical appliances might have been enlarged with advantage and others than those commonly used at the infirmary or by the examining professor displayed."

After these remarks the visitor and inspector proceed to say: "We were much pleased with both the oral and practical surgical examinations." Your committee admits its inability to interpret for the Council the thoughts of the visitor and inspector on the practical examination in surgery. In the general summation of their work under the heading "Remarks" the visitor and inspector assert that the examination in surgery is a mere pass, that "the knowledge of clinical work and of the diagnosis of disease was in many of the candidates [illegible] me instances the student's ignorance of [illegible] of pathological knowledge in its relation [illegible] ing." They do not state whether such men were allowed to pass into the profession. They suggest that the methods of teaching require revision in Edinburgh and everywhere else.

The visitor and inspector then proceed to formulate their "conclusion." In the first sentence of this conclusion they state: "It is with pleasure that we now give it as our conclusion, after a close and prolonged inspection, that the final examinations for the M.B. and Ch.B. degrees of the University of Edinburgh, taken as a whole, are 'sufficient.'" In the second sentence they say: "Some of the arrangements and methods of the examination in clinical surgery ..... not only spoilt the work ..... but turned it into what must be described as a failure." This committee cannot reconcile these antagonistic deliverances.

RECOMMENDATION BY THE COMMITTEE.

As the difference of opinion between the visitor and inspector on the one hand and the University on the other is fundamental as to the nature of the surgical examination and as the visitor and inspector have not given any detailed evidence in support of their adverse criticisms and as some of the statements of opinion by the visitor and inspector are irreconcilable with each other this committee recommends that the Medical Council should direct that a further inspection

be made of the surgical part of the final examination in the University of Edinburgh.

Dr McVAIL seconded the motion

The PRESIDENT said that it was obvious that sitting there as the representative of the University of Edinburgh he was bound to say something on this important document There were usually three documents, the report of the visitor and inspector, the remarks made by the faculty of Medicine of Edinburgh upon it and the report by the Examination Committee With reference to the report of the visitor and inspector, so much of that report was entirely satisfactory as to the mode in which the final examination was conducted that really he had no observation to make upon it except that he was pleased to find that what constituted three fourths of the examination was very cordially commended But there were parts of the report which might be regarded as strongly adverse criticisms and it was on these points that he specially wished to speak because he thought he might be able to clear up certain questions which the visitor and the inspector did not seem entirely to have apprehended The points that he thought he ought to comment on were those which might be classed under the general head of surgical anatomy, procedure operative surgery, and then certain general observations which were interspersed throughout the report because it was perfectly obvious in reading the report that that part of the examination which was regarded by the inspector and visitor as defective was the examination in clinical surgery and in practical surgery He would begin with that part of the report which appertained to the surgical anatomy and procedure In this part the inspector and visitor said —

During the three afternoons we devoted our attention to this part of the surgical clinical examination not a patient was placed in the position of one who had to undergo the operation suggested No mention was made of assistants or the use of instruments which might be required No attempt was made practically to get out of any candidate any precise knowledge of the relation of an artery or nerve beyond what book knowledge would have given him Indeed the examination was so unsatisfactory that we were enabled to realize the truth of the severe criticisms we have heard of this method of examination in a way which we never before believed to have been possible.

He did not exaggerate when he said that that was a statement of a sweeping character and it was quite obvious that anyone bringing a charge of this kind against the examination of a body the position of which in the medical profession was so well recognised as the University of Edinburgh ought to have supported the charge by individual examples He thought the General Medical Council had in this matter of visitation and inspection of examinations laid down a standing order which was of great importance in connexion with the mode in which reports were to be presented to the Council On Saturday he thought he heard Sir George Philipson (the visitor in this case) say when the question of standing orders was referred to by Sir John Batty Tuke that he was not aware of any reference in his commission to standing orders Perhaps the Council would allow him to read a copy of the commission which was given to Sir George Philipson It was as follows —

On behalf of the General Council of Medical Education and Registration for the United Kingdom and in accordance with the Council's standing orders on the subject of visitation and inspection of examinations I hereby appoint you as a visitor

And so on It was the duty of an inspector and of a visitor to know what the standing orders said on this matter for if they did not look into the standing orders he was sorry to have to say he did not think that they had fully discharged their duty Now he would ask them to look at Standing Order No 18 which read —

[illegible]
Council at such times as may be [illegible]
reports as to the sufficiency or insufficiency of the materials for and the modes and results of the examinations which they inspect or visit.

He would ask Sir George Philipson whether he kept a diary?

Sir GEORGE PHILIPSON I had no diary furnished by this Council

The PRESIDENT Did you keep a diary?

Sir GEORGE PHILIPSON I have not got it here

The PRESIDENT The standing order says the diary is to be presented to the Council Now I should like to see that diary

Sir GEORGE PHILIPSON I shall be very happy to furnish it but I have not got it here

The PRESIDENT The standing order says the diary shall be presented to the Council Your commission distinctly states that the visitation is to be "in accordance with the standing orders on the subject of visitation and inspection

Sir GEORGE PHILIPSON A diary is in existence

The PRESIDENT I would like to call for it Without it how am I to go on with this discussion?

Dr PYE SMITH May I ask whether you are speaking as the delegate from Edinburgh or as the chairman of the Council?

The PRESIDENT It is, I confess difficult to separate the two capacities still speaking as the representative of the University of Edinburgh, I think I have a right to ask for this diary

Sir HUGH BEEVOR I should like to have the commission read again because I also was appointed and I failed to keep a diary

The PRESIDENT We will come to that when we take up your visitation

Sir HUGH BEEVOR said that he did not read into the commission the meaning which the President had given

The commission having been read again

The PRESIDENT said that surely Sir Hugh Beevor took the trouble to look into the standing orders But, to proceed, the fact remained that they had not got Sir George Philipson's diary before them

Mr BROWN Have we got the diary of the inspector, Mr Bryant?

The PRESIDENT I have not seen it

Mr BROWN Then we ought to obtain it

The PRESIDENT continuing said that he was now going to question the truth of the paragraph which he had read (Here he quoted extracts from a statement supplied to him by one of the examiners) These extracts in his opinion showed that the paragraph did not correctly describe the nature of the examination Now as regarded the question of surgical anatomy and procedure In this connexion a statement was made which was of a very curious kind, namely —

Let Parts B and C of this clinical surgical examination be conducted entirely apart from the wards and sick people Let the professor of clinical surgery for whom we both have an admiration utilise his own theatre for his examinations in operative and manipulative [illegible]

It seemed to him that this was really a somewhat novel recommendation because of what it signified—namely, that surgical anatomy and procedure should be divorced from the bedside They in Edinburgh understood a clinical examination to mean an examination at the bedside—an examination of the patients in bed and in the conditions in which a patient would be examined And yet the visitor and inspector suggested that this part of the examination should be conducted elsewhere Now as to operative surgery This was a subject as to which there was difference of opinion amongst examining bodies and he thought the difference of opinion was largely due to the facilities which the different schools had in procuring dead bodies Where dead bodies could be obtained plentifully there operative surgery was carried out necessarily to a much greater extent than where [illegible] asively obtained But not [illegible] from the report that the [illegible] contempt upon this method [illegible] of testing the qualifications of candidates—namely by operations upon the dead body—he was sure that that was not the opinion of the Council Another part of the report seemed to put the University of Edinburgh into a position in which it ought not to be placed by anyone occupying the office of inspector or visitor It was this paragraph —

[illegible]
application at [illegible]

That was a reflection upon the practical training in the University which he could not allow to pass unnoticed It [illegible]

welcomed the proposal that a further inspection should be made of the surgical part of the examination. The report struck at the honour of a great institution. Sitting at the table he saw seven graduates of the University of Edinburgh and he felt assured that these gentlemen along with himself would consider that nothing should appear on the minutes of the Council reflecting on the honour of that University.

Sir VICTOR HORSLEY said he hoped that the recommendation of a further inspection would be carried out. He took that attitude not only because there was a conflict of opinion on the question of fact which had to be cleared up but also because he noticed that the rejections in surgery at this examination were one-third higher than the rejections in medicine and it did seem to him that this possibly suggested that the method of teaching surgery in Edinburgh required some readjustment. He thought that the date 1905 should be inserted in the recommendation. When the present inspector was appointed for 1904 he (Sir Victor Horsley) protested against the appointment on the ground that the inspector had not been within the walls of a surgical school for 15 years and he made the suggestion for the insertion of 1905 in order to secure that another inspector should be appointed for this work.

Dr. PYE-SMITH moved that the recommendation be amended to read :—

As the difference of opinion between the visitor and inspector on the one hand and the University on the other is fundamental as to the nature of the surgical examination, this committee recommends that the Medical Council should direct that a further inspection be made of the surgical part of the final examination in the University of Edinburgh.

He considered that it would be better to leave out what he might call the controversial preamble. At the same time he could not agree with the view that the report was a slur on the University. All licensing bodies were liable to the same fate. London and Oxford had in the past been subjected to it and good had resulted. For their own sake all such institutions should welcome criticism.

Sir JOHN MOORE, in seconding the amendment, said that when he was a visitor he kept a diary but he was afraid the Council could hardly interpret it. No such thing as calling for the visitor's diary was contemplated according to his reading of the standing order. He could assure the Council that there was in existence a diary relating to this inspection of the University of Edinburgh. The inspector had that diary in his possession and he was the person who should be asked for it.

The PRESIDENT : As a matter of fact, I have acted as a visitor. I kept a diary and my colleague kept a diary.

Sir JOHN MOORE said that it was only when the Council called for it that the diary was to be presented. There was a recommendation to the effect that Parts B and C of the clinical surgical examination should be conducted entirely apart from the wards and sick people. That had been objected to on the ground that this was a clinical examination in surgery, but it was the faculty of the University that had divided the clinical examination into three parts. They would find : Part A, examination of one or more cases at the bedside; B, examination upon two previously assigned operations—on surgical anatomy and surgical procedures; and C, instruments. The visitor and inspector were perfectly in their rights to advocate that those parts of the examination would be more satisfactorily conducted in a theatre provided for the purpose. He could not agree that the honour of the University of Edinburgh was liable to be tarnished by an unfavourable report on the examinations. The Royal College of Physicians of Ireland had submitted to criticisms and had done their best to meet the views expressed in those criticisms.

Dr. NORMAN MOORE supported Dr. Pye-Smith's motion. He thought that they ought to regard the remarks or decisions of the visitor and inspector whom they appointed themselves with the kind of respect with which they would regard the remarks and decisions of a judge. He confessed, however, that he found that inconsistency of one part with another to which the Examination Committee had referred and he thought the judgment called for revision. There was one flaw in the report which consisted of going into subjects which were not the subjects of examination. The state of education or mind of candidates who were rejected, and the reason why they ventured to come where they must be rejected, seemed to be points with which a visitor and inspector should not deal.

Sir CHRISTOPHER NIXON said that his remarks would be a defence of the visitor. The sense of responsibility in connexion with visitation led him to impress on the Council that they should deal very tenderly with a report submitted by their visitor. A man who was to discharge his duty honestly to the Council was not to be deterred because he had given an adverse opinion if it were an honest opinion. A great amount of exaggeration seemed to attach to the points of criticism. Was there not a risk of the profession at large saying that when a powerful corporation was attacked it would have a certain amount of defence, whereas smaller bodies would not have the same defence? There was nothing in the criticism which would warrant the distinguished principal of the University of Edinburgh saying that there was any attack on its honour. The position of the University was too stable and deep-rooted in the traditions of Scotland and the whole empire to be affected by a petty little comment on how the clinical side of an examination was conducted. He supported the amendment.

Mr. THOMSON expressed the opinion that according to the Act the inspector had to report on the sufficiency or insufficiency of the examination. When the inspectors had done their duty in this respect their duty was practically complete. The University could raise its standard to any extent it liked or lower it so long as it was sufficient. That was a matter for the University. Referring to the true reading of the standing orders he submitted that the bulk of the documents before them did not form part of the report but were part of the diary which should have been presented with the report. He differed from Dr. McVail on that point. The Privy Council was only concerned with the report which should deal only with the sufficiency or insufficiency of the examination. He would like that for the future more definite instructions should be given to the Council's visitors and inspectors.

Dr. MCVAIL saw no objection to accepting the amendment of Dr. Pye-Smith. He thought they might improve it by striking out everything except the recommendation that a further inspection should be made. The committee, he said, had had difficulty in considering this report and he understood how keenly the report had been felt by the University of Edinburgh because it had never had a similar report presented to it. It was true that at the end the visitor and inspector accepted with pleasure this examination which was such a ghastly failure, but was the Council to remain satisfied? No such report had ever been given in before and the whole thing had been done without any detailed instances. He would regret if the Council ever instructed its visitors and inspectors to report in that way.

Dr. MACALISTER at this point suggested that Sir Patrick Heron Watson, instead of moving the adoption of the report, should move only the adoption of the recommendation.

This proposal was accepted.

Sir GEORGE PHILIPSON said he [illegible] a correction of the statement he made o[illegible] aware that there was anything in [illegible] reference to the preparation of the report, the arrangement of it, or the conduct of the visitation. He was sorry he was not aware of that when they undertook the visitation and inspection. With respect to his diary he was sorry that Sir William Turner from the chair should indicate any uncertainty as to it.

The PRESIDENT : I do not indicate that.

Sir GEORGE PHILIPSON said he accepted that. If it was the wish of the Council that it should be forwarded he would do so without delay. Since he had been a member of the Council he had never heard of a visitor being asked to produce his diary. If he had been asked he would have brought it. As the outcome of the discussions that had taken place he would say that it was desirable for the aid of the visitor and inspector that there should be more definite rules and regulations. After dealing with some of the criticisms of the report he said that every care had been taken by the visitor and inspector as to the truth and correctness of the statements which they placed on the report. Those statements were true. He wished to say nothing about the counter statements in the remarks of the body inspected and reiterated by the representative of the University. The visitor and inspector were actuated by only one motive—faithfully and honourably to carry out the trust that had been imposed upon them. In conclusion, he acknowledged the kindness, courtesy, and consideration they had received from Sir William Turner and the officials of the University. Although the criticisms had been adverse that in no way

diminished the remembrance of the pleasure of their visit to the ancient and renowned University of Edinburgh

Dr PYE SMITH agreed to the amendment being put in this form —

That the Council direct that a further inspection be made of the surgical part of the final examination in the University of Edinburgh during the year 1905

Sir PATRICK HERON WATSON said that on behalf of the Examination Committee he would accept the amendment

Mr BROWN said they were a body who were spending money to improve medical education for the sake of the public and he objected to the discussion on an important report of this kind being burked or shelved He was pleased to hear from Sir George Philipson that every word in the report could be justified He was sorry it appeared to be the feeling that a re inspection should take place because it was a slur of a serious character He proposed that the inspector and visitor should be instructed to give their reasons for their conclusions

Dr LINDSAY STEVEN stated that in regard to examination in the presence of two examiners the Glasgow School of Medicine interpreted the rule in a different way from what was done in Edinburgh In Glasgow every student must have both examiners paying attention to him at the same time They did not have two examiners examining two students in the same room at the same time

On a vote the PRESIDENT announced that Dr Pye Smith s proposal as accepted by Sir Patrick Heron Watson was agreed to three members voting against it

Mr BROWN moved that the visitor and inspector be asked to give details as far as might be necessary to bear out their conclusions

Mr JACKSON seconded the motion

The PRESIDENT said that was one of the great objections to this report in Edinburgh that it did not give details and perhaps if it had given details a good many of the remarks he had made would not have been made The report gave general statements but not evidence to bear out those remarks

Dr MACALISTER said it was the duty of every visitor and inspector to give details If this were given as a special instruction in the present case it might be considered necessary in other cases

Mr BROWN then withdrew his motion saying that he would at a future date move that a committee be appointed to draw up rules and regulations on this subject

The Examinations of the Apothecaries Hall of Ireland

On the motion of Sir PATRICK HERON WATSON the report of the examinations of the Apothecaries Hall of Ireland carried out by Mr Alexis Thomson and Sir Henry G Howse was received and entered on the minutes These two gentlemen, as inspectors of the examination considered it sufficient

A motion expressing the concurrence of the Examination Committee with the inspectors conclusion was adopted also on the motion of Sir PATRICK HERON WATSON

The Final Examinations at the University of Glasgow

Sir PATRICK HERON WATSON moved that the report on the final examinations in medicine, surgery and midwifery of the University of Glasgow should be received and entered on the minutes The visitor Sir Hugh Beevor and the inspector, Mr Thomas Bryant expressed their opinions of these examinations in the following passage —

The remarks concerning the University of Edinburgh alluded to in this passage were published as one of the appendices of the report on the University of Glasgow

Dr McVAIL seconded Sir Patrick Heron Watson s motion

Dr McCALL ANDERSON said that he would like to move an amendment He was surprised to find that 'the remarks prepared with special reference to the University of Edinburgh by Sir Geo Hare Philipson and Mr Bryant' should be included as an appendix University of Glasgow The Coun connexion with this that the name of Sir Hugh Beevor, did not appear under these remarks What he (Dr McCall Anderson) could not understand was how a visitor to the University of Edinburgh had any personal knowledge as to the answers made by the candidates for examination in Glasgow He did not think that these observations in the appendix fitly appeared in the place a totally different position from e remarks because in Edinburgh essential part of the report and were signed by both the visitor and the inspector He would therefore move as an amendment —

That the appendix in question should not be entered upon the minutes but only the report signed by the visitor and inspector

Mr BROWN seconded the amendment

Sir GEORGE PHILIPSON disclaimed all responsibility for the fact that the remarks on the University of Edinburgh should have been appended to the report on the University of Glasgow

Dr McVAIL pointed out that the report as regarded Glasgow was exactly in the same position as the report concerning Edinburgh in this respect The Council was bound to accept it as it was received from the inspector and the visitor A member of the Council might move that it disapproved of the appendix and it could signify its disapproval of it to the Privy Council

Sir HUGH BEEVOR explained that owing to the delay of a proof he had signed the report before seeing the appendix

Mr BROWN suggested that the appendix and also the part of the report which alluded to it should be excluded from the minutes

The PRESIDENT We came to the conclusion on Saturday that we could not mutilate a report

Mr BROWN remarked that the appendix which was not signed by the visitor Sir Hugh Beevor was not a part of the report

Dr McCALL ANDERSON said that the inclusion of the appendix was repudiated both by Sir Hugh Beevor and Sir George Philipson

After further discussion

The PRESIDENT gave his ruling that the appendix alluded to was part of the report and he could not accept Dr McCall Anderson s amendment to exclude it

It was then agreed that the report should be received and entered on the minutes

Sir PATRICK HERON WATSON then moved that the Council should adopt the report of the Examination Committee expressing agreement with the conclusion of the visitor and inspector that they were pleased with the final examinations of the University of Glasgow

Dr McVAIL seconded the motion which was agreed to

The Final Examinations of the University of Aberdeen

Sir PATRICK HERON WATSON moved that the report on the inspection of the final and qualifying examinations of the University of Aberdeen in medicine surgery and midwifery should be received and entered on the minutes which was agreed to ted the inspection of the Aber ... his opinion of them in his report in the following terms —

The final conclusion of the reporter of this examination is that it is a ... points an excellent one It is certainly ... has been ... so that the ... to the same

On the motion of Sir PATRICK HERON WATSON the Council adopted a report of the Examination Committee in which it was stated that the conclusion of the inspector regarding the final examination of the University of Aberdeen is that it is a good one and in some points excellent

The Final Examinations of the University of St Andrews

Sir PATRICK HERON WATSON moved that the report on the inspection of the final examinations in medicine surgery, and midwifery of the University of St Andrews should be re

John W Moore the visitor, and Mr Thomas Bryant the inspector made the following statement —

examinations of the he written examina ical examinations in

medicine and surgery as satisfactory but too limited; the oral examinations in medicine and surgery as good and that in midwifery as most satisfactory. The examinations in special surgical branches were full and satisfactory and the one in mental diseases good and highly interesting. The examination in practical surgery was sufficient.

The motion was agreed to.

Sir PATRICK HERON WATSON then moved that the report of the Examination Committee on the inspection of the University of St. Andrews should be adopted by the Council. The report of the Committee stated that it was of opinion that the whole examination was satisfactory but it reviewed the examination at some length.

Dr. MCVAIL seconded the motion.

Dr. MACKAY said that this report on the inspection had been very disappointing to all those who were associated with the medical school of St. Andrews. He also thought that the report of the Examination Committee might have been improved in many respects. In the course of the report of the visitor and inspector it was stated that they were informed that all candidates were excluded from the wards of the Royal Infirmary, Dundee, for ten days previously to the examination but they were by no means sure that this method was effective. He was there to give an emphatic denial to that statement made by the visitor and the inspector. In no case was a man examined on a case in which he had been previously employed. There was another criticism to the effect that the examination in clinical medicine as leading to a qualifying degree appeared to the visitor and the inspector as somewhat limited. The medical faculty of the University considered this matter. It was also stated by the inspector and the visitor that in one of the oral examinations the teaching examiner was too prone to show his teaching capacity rather than his examining power. He wished to say that the teacher in this case was one of the ablest and best men in the University and a man of whom they were proud. He had full confidence in his work as examiner. He thought it right to allude to these matters. The medical faculty of St. Andrews had sought in vain to find out the general principles on which these inspections were conducted.

Sir JOHN MOORE said that he would reply to the criticisms of Dr. Mackay. At the examination which he inspected there were only six candidates and a certain allowance must be made for the inexperience of some of the examiners. As to the remark that the method of excluding candidates from the Royal Infirmary at Dundee for ten days previously to the examination was ineffective, he found that there was one case of pulmonary consumption which must have evidently been in the ward for weeks. It was a new examination and a little experience was probably what was wanted. He held that both he and Mr. Bryant were justified in their report.

The report of the Examination Committee was then adopted.

The Council adjourned until the following day.

TUESDAY, NOV. 29TH.

The Council resumed on Tuesday, Sir WILLIAM TURNER presiding.

An Explanation.

Sir HUGH BEEVOR, as a matter of explanation, said his signature appeared at the end of the report on the University of Glasgow and the previous day he had stated that the signature did not apply to the last paragraph. He had found that on the final proof his signature was put in as a matter of form in the office. That final proof was not sent to him. He thought it should be an instruction that no signatures should be appended without final proofs being sent.

Examinations of the University of Edinburgh.

Sir PATRICK HERON WATSON moved:—

That the Examination Committee [illegible] their report on the final examination of the [illegible] in conjunction with the results of the addi[illegible]rgical part thereof directed by the Council to be made in 1905 and to present a final report on the two inspections at the November session of the Council in 1905.

Dr. MCVAIL seconded the motion which was agreed to.

Final Examinations of the English Conjoint Board.

Sir PATRICK HERON WATSON moved the adoption of the report of the Examination Committee on the further reply by the Royal College of Surgeons of England to the inspector's report on the final examinations of the English Conjoint Board. The following were the terms of the report:—

The inspection of the third or final examination in medicine, surgery, and midwifery of the Conjoint Examining Board in England was held in January, 1903. The report of the visitor and inspector was forwarded to the body inspected and subsequently this report, together with the remarks by the body inspected, was referred to the Examination Committee. This committee's report was adopted by the Council on Nov. 30th, 1903. Some criticisms were made by the visitor and inspector in reference to examinations in operative surgery and in ophthalmic and aural surgery and also in reference to the scheme of marks in use at the examination. These criticisms were referred by the Colleges to the Court of Examiners to consider and report thereon to the Council of the College. This Council forwarded the remarks of [illegible] to the Medical Council, and on May 30th [illegible] Council by resolution referred the reply of the Co[illegible] Examination Committee for further consideration and report. The Examination Committee observes with satisfaction that the Court of Examiners recommend such an alteration in the system of marking as practically to meet the objections of the visitor and inspector. The Examination Committee regret that the Court of Examiners considers that such an examination in ophthalmic surgery as this committee regarded as being essential is unnecessary and that the Court of Examiners find an examination in operative surgery on the cadaver impracticable owing to want of material, and further, that they do not approve of candidates being made to perform operations on the cadaver. The Court of Examiners are of opinion that a written report on a medical and surgical case is neither useful nor practicable. The Examination Committee see no reasons for altering their opinion as to the value of written reports in testing the knowledge of candidates.

Dr. MCVAIL seconded the motion.

Sir CHARLES BALL, referring to the examination in operative surgery, said the Court of Examiners did not consider it desirable that candidates should be examined in operative surgery on the cadaver. It was also pointed out that candidates were required to attend courses in operative surgery. But if students had to attend courses of operative surgery on the dead body it was improbable that they would pay very much attention to those unless they were examined in the subject on the dead body. Improvements in training in operative surgery were very great and students going into general practice might be brought face to face with any emergency. He maintained that they could not be taught in any other way in this country than by operations on the dead body and if this teaching were to be a reality there must be an examination in it. If the subjects could not be obtained in sufficient quantity the best way was to render the students liable to this form of examination as far as the supply would go.

The PRESIDENT, replying to Sir VICTOR HORSLEY, said it would be possible to propose a motion on this subject next session.

The motion was then adopted.

Applications for Exemption.

Consideration was resumed of the recommendation contained in the last paragraph of the report of the Public Health Committee—viz., "That the Council should refuse a certain application for exemption."

Sir JOHN BATTY TUKE, in supporting the motion, said he had always taken the greatest interest in public health inasmuch as he was the chairman of the Education Committee which first drew up the original rules and regulations. He objected to any relaxation of those regulations, the original object of the Council being that there should be a high standard of qualification. A most dangerous form of relaxation was the introduction of individual cases. It was always easy to do a good-natured act at the expense of a general principle and it was equally hard to maintain a principle for the public good.

Dr. BRUCE said the Public Health Committee had agreed to support Dr. Lindsay Steven's motion that the Council would offer no objection to the applicant's being admitted to examination for the Diploma in Public Health. The committee would also consider a motion by Sir JOHN TUKE which was on the paper but which would not be moved.

Dr. LINDSAY STEVEN then moved his amendment in an altered form, viz.:—

That should this applicant be admitted to examination by any of the qualifying bodies without having formally complied with Rule 3, the Council will raise no objection to the registration of his diploma when obtained.

Sir CHARLES BALL seconded the motion.

Dr. MACALISTER said he still held that it was dangerous to grant exemption in particular cases and he believed it was the business of the Council not to entertain such exemptions. It seemed desirable that it should be remitted to the Public Health Committee to draw up new rules dealing with such cases and to report during the next session.

Dr Lindsay Steven's amendment was carried and became the finding of the Council

Sir JOHN BATTY TUKE s notice of motion was remitted to the Public Health Committee for consideration and report, viz —

rules for Diplomas in Public shall produce evidence that medical officer of health under of a special sanitary diploma

Pharmacopœia Report

Dr MACALISTER, in moving the approval of the report of the Pharmacopœia Committee, referred to the retirement of Dr Payne who had had much to do with the cataloguing and care of the valuable library The committee was glad that Dr Moore had undertaken the charge which Dr Payne had laid down He alluded with satisfaction to the sales of the Pharmacopœia and directed the attention of the Council to the inclosures of the Privy Council relative to the subject of uniformity of pharmacopœial preparations Germany, he said, had made some little reservation on the ground that the Imperial Government had no final control over the Pharmacopœia That was a case for the Federal Council In England he had signed the agreement subject to such minor modifications as the progress of medical science and pharmaceutical science might render necessary from time to time That was in order to safeguard the rights of the General Medical Council which by statute was charged with the final formulation of the Pharmacopœia It was held that those words were quite enough to leave them free from other than moral understanding to adopt what was practical and possible in the international agreement Austria adhered with the exception of one or two medicines which did not appear in its Pharmacopœia The United States were in somewhat the same position as Germany The Pharmacopœia there was the work of the National Convention but the representative of the United States Government was the delegate at Brussels and he adhered to this agreement, which he had a very great hand in settling The other reservations were trifling and did not at all affect the principle of the matter The net result was that uniformity to be established in The Pharmacopœia Committee would keep in mind the terms of the agreement when it under took the revision of the Pharmacopœia of 1898 A dispatch containing inquiries drawn up by himself had been addressed by the Colonial Office to the administrations of the British Empire and they hoped in a year or two to have such answers as would enable them to decide on the question of an Imperial Pharmacopœia

Dr NORMAN MOORE, in seconding the motion referred to the enormous labour and the very great diplomatic skill of Dr MacAlister in carrying through the negotiations He wished to mention also that the Council had been presented by Dr Payne with a little book which was a copy of a very interesting Pharmacopœia of 1651

The report having been approved

Dr NORMAN MOORE moved that the Council should express its thanks to Dr MacAlister for his services and to Dr Payne for his courteous present to the Council

Dr LITTLE seconded the motion which was agreed to

Finance Report

Dr PYE SMITH moved the adoption of the recommendations of the Finance Committee and the motion was seconded by Mr JOMES and agreed to These were that the £1000 received from the builders should be applied towards the reduction of the mortgage of the English Branch Council of the General Medical Council s property that when the accounts of the Dental Fund for the year were made up the available surplus standing to the credit of the fund should be invested and that the funds to carry out the suggestions in the second paragraph of the report should be provided by means of a loan from the Pharmacopœia account bearing interest at 3 per cent repayable by equal annual instalments over a period of five years

Preliminary Scientific Education and Examination

Sir VICTOR HORSLEY presented the report of the Committee on Preliminary Scientific Education and Examination On the second page they found a list of the subjects which the various licensing bodies recognised as elementary biology That list of subjects was obviously too large In the discussion last session there was a distinct feeling on the part of many members that if possible the curriculum should be lightened There was a feeling among many members especially regarding biology that students were being carried too far in different directions The committee did not wish to interfere with the liberty of any teaching or licensing body which might see fit to demand of its students extended courses in various directions, but by way of putting down minimum requirements and considering what was essential they came to certain conclusions on the various subjects which they found were being taught and examined into by the licensing body They felt that where the curriculum could be lightened was in subjects of general or descriptive botany The committee was of opinion that for the purposes of the preliminary scientific stage of the curriculum the Council should deal with elementary biology in the same manner as it had dealt with physics chemistry and practical chemistry by defining what should be necessarily included in the syllabus of the subject The committee considered (1) that the branches to be thus included should comprise the elements of cryptogamic botany and bacteriology, of morphological zoology and of embryology (2) that these branches should be illustrated by means of a small number of selected vegetable and animal types and (3) that the required course of study should throughout have regard to function as well as to structure In framing its proposals the committee had sought to lighten the curriculum by retaining only those branches of the subject which were not only valuable for scientific training but had also a direct bearing on the subsequent work of the medical student The branches which the committee from this point of view thought it unnecessary to include in the minimal curriculum were general or descriptive botany and the more advanced parts of botanical anatomy histology, and physiology The committee accordingly proposed that the following should be added to the recommendations adopted by the Council on May 27th, 1904 —

lines of embryology

On the motion of Sir VICTOR HORSLEY seconded by Dr MACALISTER the report was received and entered on the minutes

Sir VICTOR HORSLEY moved the adoption of the committee s recommendation

Dr WINDLE seconded the motion

Mr THOMSON expressed the opinion that this was one of the cases where they would get more assistance if they gave the licensing bodies a hint about what the Council proposed to do

Dr MACALISTER said that they had consulted the bodies not only as to their actual courses but as to their views on the subject They had a number of valuable answers and there was one from the University of Oxford

Mr THOMSON replied that that was not the reply of the University but of the teachers

Dr MACALISTER said that all they knew was that this was forwarded by the Council to the committee

Dr NORMAN MOORE speaking as a member of the committee said that the committee felt that this subject of biology was not one on which a rule could be laid down for ever It must vary with the progress of medical education There were many people engaged in medical education who thought the subject ought to be omitted altogether The Council had considered that question and took the view that at present it ought to be included This was merely a recommendation

Dr MACKAY said that he congratulated the committee on the excellence of its report The work had been splendidly performed

Sir VICTOR HORSLEY said it was due to Mr Thomson to point out that the Council at the last session passed a recommendation that in respect of elementary biology a syllabus or syllabus of the subject should be issued by each licensing body It was entirely in the hands of the licensing bodies to say how much should be taught

The recommendation was then adopted

Medical Companies Bill

On May 31st 1904 the General Medical Council passed the following resolution —

That in view of the judgment of Chief Baron Palles, the General

Medical Council hope that the Government will take such steps as may be necessary:—

(a) To restrain the registrar of joint-stock companies from registering any new company unlawfully using the term dentist or any similar title which would be likely to lead the public to believe that the members of such company were registered dentists when such is not the case.

(b) To prevent companies already registered from continuing unlawfully to use the term dentist or any similar title which would be likely to lead the public to believe that the members of such companies were registered dentists when such is not the case.

(c) To prevent in like manner the use by companies of unlawful titles which would be likely to lead the public to believe that the members of such companies were registered medical practitioners when such is not the case.

In response to this resolution the following letter was received by the President:—

Privy Council Office, London, S.W.,
21st October, 1904.

SIR,—Referring to your letter of the 1st of June last, I am directed by the Lord President of the Council to state that the Board of Trade, to whom your letter was referred, have intimated to his lordship that in the course of the consideration they have recently given to the claim to registration of "The American Dental Surgeon Specialist, Limited," they have been advised that companies with titles indicating that one of their objects includes the carrying on the business of dentistry, such as the one in question, whether the memorandum does or does not limit the carrying on of the business of dentistry to persons duly qualified to practise dentistry, are entitled to registration so long as the title is not calculated to mislead the public into supposing that the business of the company is carried on by persons having special skill in dentistry; and that the case before Chief Baron Palles (the King at the prosecution of Sydney G. Rowell) was properly decided on this ground; and further, that other forms calculated to deceive may occur which would disentitle the company to registration. The Board's legal advisers added that the title of the American Dental Specialists, &c., appeared to them to be of such a nature as to render it proper that its right to registration should be contested, it being calculated to induce the belief that those who form the company have special qualification in dentistry.

The Board have been further advised that companies, the titles of which do not necessarily indicate that one of their objects includes the carrying on the business of dentistry, but the carrying on of such business is included in the objects clause of the memorandum, are entitled to registration, whether or not the memorandum of association limits the carrying on of the business of dentistry to persons duly qualified to practise dentistry.

The Board are moreover advised that they should exercise their discretion and permit the change of name in the case above-mentioned as it appears to be a change for the better.

I am, Sir, your obedient servant,
A. W. FITZROY.

Sir William Turner, K.C.B., &c., &c., &c.,
President of the General Medical Council.

Mr. TOMES moved, Sir VICTOR HORSLEY seconded, and it was agreed, that the following report by the Medical Companies Bill Committee should be received and entered on the minutes:—

The Executive Committee, at its meeting on Nov. 21st, 1904, considered a communication from the Privy Council respecting limited companies for the practice of dentistry and adopted the following resolution:—"That this communication and a return of the House of Commons obtained by Sir John Tuke be remitted to the Medical Com- for consideration and report to the General ent session and that Sir Charles Ball be added

Your committee having considered the correspondence referred to them recommend that an answer be sent to the letter of the Lord President in the following terms:—The General Medical Council beg to acknowledge the receipt of your letter of Oct. 21st and to express their satisfaction that the legal advisers of the Board of Trade concur with the judgment of Chief Baron Palles and hold that titles which are calculated to deceive the public into supposing that they will receive treatment by persons possessed of special skill in medicine or in dentistry would disentitle the company to registration.

This is, so far as it goes, a step in advance, for hitherto it would appear that registrars did not consider this any part of their duties, but that they were called upon to register any company under any title so long as the formalities of the Acts were complied with. But it is, at best, a very partial remedy for the evils which have been from time to time pointed out by the General Medical Council as arising from company incorporation, as is indeed indicated in the last two paragraphs of your letter, in which it is pointed out that, if it takes a title to which objection is not taken, a company may take powers in its objects or in its memorandum of association to conduct medical or dental practice without its being restricted to the employment of duly qualified persons. The inadequacy of the mere avoidance of a title containing objectionable phrases as a vils complained of is further illustrated by turn of companies registered for the "specific medical or dental practice," obtained from the Board of Trade at the instance of Sir John Tuke. A cursory examination of the pages of a single medical journal for three years (the *British Medical Journal*) discloses the names of no less than seven medical companies, the proceedings of which have been condemned in the medical press, and one of which has on several occasions been subject to severe comment in the findings of coroners' juries. Owing to the limitations imposed by the words "for the specific purpose" in the Parliamentary return, not one of these companies appears in that list. Similarly, nine companies which have been the subject of comment in the general press within the last two years are absent from the Board of Trade list, whilst a number of dental companies, formed immediately after conviction by persons who have been prosecuted and convicted under the Dentists Act, are also absent from the list. It therefore becomes necessary to ask the attention of the Lord President to a brief statement of the facts as they appear to the General Medical Council. We believe the objects of legislation in regard to company formation to have been essentially financial, so that due protection should be afforded to legitimate financial enterprise, and that the incorporation of companies for purposes other than this was not contemplated in the Acts. In support of this view we may recall the circumstances attendant upon a previous attempt at legislation. In 1899 we were so far successful in demonstrating the existence of a crying evil that a short Bill was introduced in the House of Lords, the object of which was to render companies equally liable with individuals to the provisions of the Medical and Dental Acts. This Bill was, by Committee of the House of Lords placed as two clauses in the Companies Acts Amendment Bill then before the House. From this Bill the two clauses were expunged in the Committee stage in the House of Commons after the Standing Committee on Trade had decided by a considerable majority to retain them. They were dropped out on the ground that they were not germane to the general tenour of the Bill, the objects of which were financial.

We contend and believe that we have fully established that these medical and dental companies for the most part have been incorporated for purposes quite other than financial; indeed, in a large majority of them the subscribed capital is merely nominal, and is the smallest amount which will comply with the requirements of the Acts—namely, about £8. Moreover, circulars have been sent out by company agents, recommending company incorporation as a means of evading the prohibitory clauses of the Medical and Dentists Acts. It is therefore evident that some other object has been in view in their incorporation, and we proceed to point out its presumable nature. A limited company appears to be in a different position from an individual in two principal respects. It has been able to make use of titles prohibited by the Medical and Dental Acts without being, as an unqualified individual would have been, liable to prosecution and fine. By the new interpretation which has been placed upon the duties of the registrars of companies, this may be to a considerable extent remedied in the case of future companies, though, as already indicated, their freedom to put anything into the memorandum of association, or into the objects for which the company is formed, weakens the protection to the public thus afforded, and encourages methods of evading existing statutes. Beyond this, and of equal or greater importance, is the avoidance of any personal responsibility; and it has already been pointed out that some of the companies whose conduct has been the most flagrant have already avoided putting anything into their title which would bring them into the Board of Trade return. The servants of such a company may be, and have been, by means of lectures, pamphlets, advertisements, &c., placed in such a position that the public is led to suppose that they will receive skilled medical or dental treatment at their hands, and they may display ignorance or commit malpractice and even be censured by a coroner without any legal remedy being available against them. They are the irresponsible agents of an irresponsible company. The company itself has committed no offence known to the law and so a protection is afforded to unqualified persons actually greater than that enjoyed by the qualified practitioner who is required to possess reasonable knowledge and to have exercised reasonable care and skill. Instances can be cited, if necessary, in support of this proposition. The General Medical Council therefore express the hope that th as may be necessary to prevent th Dental Acts being evaded by persons provisions of the Company Acts. And the General Council will, if it is desired, be prepared at the proper time to furnish detailed evidence in support of the propositions which they have advanced.

Mr. TOMES moved:—

That an answer be sent to the letter of the Lord President in the terms contained in the report.

He pointed out that it did not follow that the decision would be retrospective, that companies which had been registered with medical or dental titles would not be allowed to continue to use these titles. This very point was, however, being raised in the Irish courts at the present moment.

Sir VICTOR HORSLEY seconded the motion which was agreed to.

Dental Board of Victoria.

The report by the Dental Education and Examination Committee on an application from the Dental Board of Victoria for the recognition of its diploma was entered on the minutes. In this report it was stated that:—

In the year 1898 two gentlemen who had obtained the licence of the Dental Board of Victoria applied to be registered in the Colonial List, tendering papers in support of their application which appeared to show that they had passed through a curriculum which was considered by the Council to be roughly the equivalent of that required by the licensing bodies in Great Britain and on this ground their application was granted. Shortly afterwards a communication was received from the Dental Board of Victoria pointing out that at the time when these gentlemen were examined and their licences granted the regulations which they had submitted in support of their application were not in force and that in fact at that date no curriculum whatever was in force, so that their admission to examination was no proof of their having passed through one. No imputation of bad faith lay upon these gentlemen who appear to have been unaware of the change which had taken place since they commenced their course of study. But in fact the Dental Board had been told on high legal authority that they had acted *ultra vires* in establishing a curriculum under the Colonial Act of 1887. Though not relevant to the present issue it may be mentioned that they were asked for the production of full evidence as to their curricul which has never been completely furnished. In 1899, under a nev authority, a fresh curriculum was the Dental Board of Victoria applied that their registered in this country. Acting upon a report of the Dental Education and Examination Committee, the Council refused to accede to this application on the ground that the new curriculum was deficient in general subjects, though adequate in the special subjects, and that it was intended to teach an outline of medicine and surgery,

&c., at the speci
being required
ing the examin

at occasion Mr Merrill, a
ia, met the Dental Educa-
explained certain difficulties

The alterations made are very considerable and may be summarised as consisting in a much closer affiliation with the University of Melbourne and in the introduction of a period of attendance at a general hospital. The University of Melbourne institutes a Dental Faculty

tion in this country, has rendered itself to a very large extent responsible for the action of the Dental Board, of the College and of the Dental Hospital, a site for which it has granted This arrange-

period of attendance upon general hospital practice is nine months,

inspection, which is impossible in the case of a distant colony, the General Medical Council will only be able to judge of the
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Mr. TOMES moved that the recommendation of the committee be adopted.

Dr LINDSAY STEVEN seconded the motion which was agreed to

Students' Registration Committee

Sir HUGH BLEVOR moved, and Dr. NORMAN MOORE seconded, the adoption of a report by the Students' Registration Committee on exceptional cases and on the application for the approval of certain teaching institutions. The latter part of the report stated that the committee recommended that the Halifax Municipal Technical School (day classes) recognised by the English Conjoint Board should be added to the list of recognised institutions approved by the Council It was also recommended that the South African College, Cape Town, should be similarly recognised. The college was already recognised by the Universities of Edinburgh and Glasgow.

The motion was carried.

Election of President

Strangers then withdrew in order that the Council might consider *in camerâ* the mode of procedure in the election of a new President When the public were readmitted,

The PRESIDENT (Sir WILLIAM TURNER) said. Gentlemen, I would recall to your recollection that in the opening remarks which I made at the beginning of the session I intimated that it was my intention to resign the presidential chair before the conclusion of the session. We have now arrived at the last day of meeting of the Council Our business for the session is almost completed and I wish now to resign this chair from the time when you have elected my successor because I think it is probably the wish of the Council that I should remain in the chair until my successor is elected, so that when he is elected and when he appears in this room after his election I shall vacate the chair and duly induct him into it In tendering, then, in this formal way my resignation I shall briefly express to you, what I had the opportunity of expressing in a more informal way at a private meeting of the Council to which you were good enough to invite me, my deep acknowledgment of all the kindness that I have received from you personally, of the sympathy that I have met with and of the support I have received in the discharge of my presidential duties, some of which, I admit, were from time to time of a somewhat trying character In stating this to you, gentlemen, I wish to say further that if in the course of the discussions which have gone on in the Council I have ever, in word or in manner, done anything or said anything to hurt the feelings of any member of the Council I shall most respectfully ask his pardon. Well, gentlemen, my resignation is now duly made to you. You will proceed to the election of my successor and then I shall vacate the chair

Sir PATRICK HERON WATSON said that it was with the greatest regret that he rose to propose the election of another occupant of the chair which Sir William Turner had filled with so much delicacy, dignity, and kindliness whilst he had been President of the Council. He was thankful that they had around the table of the Council gentlemen possessed of the same keenness of judgment, the same quietness of disposition, and the same resolution of purpose as their retiring President. The person whom he would propose on this occasion was one whom they knew had well merited the regard, esteem, and affection of every member of the Council He was a man who had been marked out as possessing qualities of no ordinary character, of high moral power, and absolute self-restraint in the conduct of all he had to do. He need hardly say that this person was Dr MacAlister It seemed hardly necessary to refer to his qualifications They had only to refer to the position which he had occupied at Cambridge. Being a Scotchman and having been brought up in a country district in Scotland, he had so distinguished himself that at Cambridge he had won a rare reputation for his mental powers He could hardly conceive anyone at the board of the Council or elsewhere who could meet their requirements better than Dr MacAlister It was with confidence and with the greatest pleasure that he nominated him as successor to Sir William Turner

Dr PYE-SMITH said that he
motion proposed by the se
In doing so he need only
warmly with all that the latter
to Sir William Turner He would also associate himself with equal heartiness with him in his expression of confidence in Dr. MacAlister

Sir WILLIAM TURNER having put the motion, declared that Dr. MacAlister had been elected President. The announcement was received with applause. Dr. MacAlister, who had previously retired from the room, was introduced in his capacity of President
Dr Pye-Smith He was
shook hands cordially with

Sir WILLIAM TURNER then said: Dr. MacAlister, it is a great pleasure in welcoming you to take the presidential chair

Dr MACALISTER then took the chair and all the members of the Council having risen to their feet he said: Gentlemen, you will not expect a speech from me on this occasion. There are two thoughts which come into my mind which I must express. One is the deep debt of gratitude that I owe to you for the honour you have done me, which I consider the greatest honour of my life, by reposing your confidence in me. The second is the deep sense indeed of the weight of the trust and responsibility you have placed on my shoulders. I feel I could not sustain that weight if I had not the assurance, which I am perfectly sure each member of the

Council will be willing to renew to me, that I have your support and coöperation in whatever is best for the Council and in the conduct of its business. I have learned, during a somewhat long service as the chairman of the Pharmacopœia Committee and of the Business Committee, to coöperate for the improvement of our proceedings with almost every member of the Council. I have learned, therefore, to work with you individually. I hope you will continue to work with me in the new responsibilities which you by your votes have imposed upon me. I thank you for the honour you have conferred on me and I would like to shake hands now with every member of the Council.

All the members of the Council present then filed past the presidential chair, each as he passed shaking hands with Dr. MacAlister and offering him congratulations.

The Council, with Dr. MacAlister in the chair, then proceeded to dispose of the remaining business on the programme.

New or Amended Regulations.

Dr. NORMAN MOORE moved:—

That in the opinion of the Council it is desirable that when new or amended regulations are adopted by the Council a formal statement should be placed on the minutes as to the effect of the new or amended regulations upon previous regulations on the same subject.

He said that owing to what had occurred during the present session of the Council an authoritative statement on this matter was required. He thought that if his motion were carried it would add to clearness and save trouble.

Dr. MCVAIL seconded the motion which was agreed to.

Registers of Medical and Dental Students.

Dr. MACKAY proposed the following motion:—

That the Council reaffirms its resolution No. 3 upon the minutes of its meeting of May 30th, 1904, in so far as that resolution refers to the establishment and maintenance of registers of medical and dental students, but without reference to the financial proposals therein contained, and remits to the Executive Committee to formulate a scheme for carrying the resolution into effect and to report thereon.

Sir WILLIAM THOMSON seconded the motion.

Sir CHRISTOPHER NIXON appealed to Dr. Mackay to postpone this motion till the next session of the Council.

Dr. MACKAY by leave withdrew his motion.

Diplomas in Tropical Medicine.

The following communication from the University of Liverpool was considered:—

Oct. 28th, 1904.

GENTLEMEN,—I beg to apply on behalf of the University of Liverpool for recognition by registration in the Medical Register of the diploma in tropical medicine of that University.

I inclose circulars showing the conditions under which the diploma is granted, from which you will observe that it is only conferred upon medical practitioners.

I am, Gentlemen, your obedient servant,
B. MOORE,
Dean of the Faculty of Medicine.

The PRESIDENT said that the answer which he suggested the Council should make to this communication was that in the absence of legislation enabling them to do so the Council had no authority to authorise the registration of the diploma of tropical medicine as an additional qualification.

The suggestion of the President was agreed to.

Mr. BROWN asked the President whether the Senate of the University of Cambridge had communicated to the General Medical Council its decision to establish an examination and to grant diplomas in tropical medicine and hygiene.

The PRESIDENT replied that no such communication had been made to the Council.

Reports of Inspectors and Visitors.

Sir JOHN BATTY TUKE moved:—

That the legal advisers of the Council be requested to state an opinion on Sub-section 3 of Section 3 of the Medical Act (1886), whether the obligation rests on the Council to forward the reports of inspectors and visitors to the Privy Council in their entirety, irrespective of what they may contain.

Dr. MACKAY seconded the motion which was agreed to.

Sir WILLIAM THOMSON moved:—

That the report of an inspector and a visitor regarding any examination shall in the first place be sent to the President of the Council for perusa [illegible] conclusions made [illegible] d back to the inspe[illegible] formally submitted to the Examination Committee.

He said that he merely desired that the document should be edited and should come down to the Examination Committee without any liability of being misapprehended. They should not then have to say that they could not understand some of the observations of the report.

Dr. BRUCE seconded the motion.

Mr. BROWN moved as an amendment that the motion be referred to the Executive Committee and that it should draw up a report on what alterations should be made in the standing orders.

Dr. LINDSAY STEVEN seconded the amendment.

After a brief discussion both the motion and the amendment were withdrawn.

The Treasury and the Council.

Sir CHRISTOPHER NIXON moved:—

That in forwarding the reply of the General Medical Council to the letter of the Privy Council of Nov. 1st this Council desires to bring formally before the Lord President the suggestion made in the memorandum of the President of the Council, dated May 1st, 1903, that the Treasury should be urged to grant a sum sufficient to defray the expenses of the disciplinary functions of the Council.

Sir WILLIAM THOMSON seconded the motion.

Sir JOHN BATTY TUKE thought that this was a hopeless motion. It had not the slightest chance.

Mr. TOMES asked Sir William Turner if he ever took any steps in asking for a grant.

Sir WILLIAM TURNER said that he had on more than one occasion taken steps in asking for a grant. Government officials wanted to save the Treasury from making grants if the money could be got in other directions. He felt that there was serious opposition in the Council to proposals to raise the money they required either by a registration fee on students or by increased fees to be put on those who for the first time came on the Medical Register. It seemed to him that the Council should endeavour to see if it could not, through an immediate communication to the Privy Council, get the latter to approach the Treasury on this matter. Unless they made up their minds and let it go to the Privy Council and the Treasury that this was their unanimous desire, he quite agreed with those who said that they would make nothing of it. If they could let it be known that it was their unanimous wish, then he ventured to point out that there were sufficiently strong arguments which could be brought to bear. They might by their persistency, perhaps, prevail upon the Treasury authorities to make an allowance to them. A sum of £1500 a year would meet all that was required. It was no use going to the Treasury with a divided Council.

Dr. NORMAN MOORE suggested that it would be better to postpone the consideration of this motion till the next session of the Council.

Sir CHRISTOPHER NIXON said that he gathered it was the desire of the Council that the motion should be withdrawn.

The motion was by leave withdrawn.

This exhausted the business on the programme and the session ended.

LIFE ASSURANCE MEDICAL OFFICERS ASSOCIATION.

INSANITY AND EPILEPSY IN RELATION TO LIFE ASSURANCE.

A MEETING of this society was held on Oct. 5th, and adjourned to Nov. 2nd, Sir DYCE DUCKWORTH, the President, being in the chair.

Sir WILLIAM R. GOWERS read a paper on Insanity and Epilepsy in Relation to Life Assurance, which was published in full in THE LANCET of Oct. 15th, p. 1061.

The PRESIDENT said that the duty of assurance medical officers was to hold the balance between what was legitimate in medicine and what was legitimate for the benefit of the offices. His experience was that the history of an applicant for assurance having an insane relative was far from uncommon—perhaps nearer one in 25 than one in 50. He believed that suicides had become more frequent in recent years and that among assured persons the great majority of them were the result of financial pressure.

Dr. G. H. SAVAGE said that he agreed almost entirely with the opinions expressed by Sir William Gowers in his summing up. To say definitely that people suffering from insanity should or should not be assured was beside the mark: each individual case must be considered. If a patient had an attack of melancholia before he was 25 years of age he would probably not recommend the assurance

of his life; if there had been two attacks he would not recommend the life on any consideration. This was not only on account of the suicidal tendency but because persons suffering from melancholia were likely to develop secondary troubles The melancholic type was also very readily transmitted by heredity, on which account he would hesitate to recommend a life when there was a history of melancholia among the ancestors (parents or uncles) There had been some cases in which he had recommended the assurance of the life of a lunatic.

Dr CHARLES A. MERCIER said that among the insane there were both insurable and non-insurable cases In no circumstances would he recommend a life in a case of acute insanity which was either now existing or had recovered, but he would not extend that prohibition to cases in which the acute insanity had been followed by a permanently damaged brain and a chronic insane condition, for, as Dr Savage had said, such lives were often prolonged beyond the natural span. Epilepsy *per se* need not render a life uninsurable Paranoia *per se* had no tendency to shorten life and fixed delusion as a rule had no tendency to shorten life

Dr G. A. HERON said that before giving an opinion as to assuring the life of an insane person it would be advisable for the ordinary life assurance officer to obtain the advice of a specialist in insanity When applicants for assurance had a strong hereditary tendency to insanity the prospect of their living easy lives or otherwise ought to be considered, for worry was a frequent cause of insanity.

The discussion was then adjourned to Nov 2nd

On that
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tion of Lif
conclusions which were as follows 1. Insanity *per se* was inimical to life It was a deterioration, mental and physical It caused more deaths in every quinquennium among the certified insane in asylums than in corresponding periods among the general population. Cases least affected were those holding fixed ideas, sometimes called paranoiacs or persons suffering from delusional insanity, as were also those in whom an acute attack of insanity had left moderate but chronic weak-mindedness Congenital weak-mindedness diminished the expectation of life 2 The most powerful and the most frequent antecedent of insanity and of epilepsy was either ancestral insanity or epilepsy 3 All medical forms of inquiry used in insurance offices should ask whether there was a history of ancestral insanity (parents and grandparents) and collaterals (uncles and aunts) 4 A suicidal tendency was eminently heritable—often appearing at the same age in the offspring as in the ancestor 5 Suicides in asylums occurred less frequently by one half than in the general population during the period of greatest liability. 6 Phthisis was a strong converging factor towards insanity. 7. Epilepsy shortened life—more so by an average of ten years than insanity 8 Antecedent syphilis in many assurable cases could not be definitely ascertained either by admission of the fact or by its sequelæ and general paralysis occurred not more often than in about 1 per cent of all cases which had contracted syphilis

Dr CLAUD MUIRHEAD contributed a paper entitled "Notes on the Family Histories of 127 Suicides who were members of the Scottish Widows' Fund Assurance Society at the time of their death." These deaths were all of males, occurred during the period 1874 to 1894 inclusive, and were equivalent to 2·13 per 10,000 living. The number of males of 20 years of age and upwards in England and Wales per 10,000 living who committed suicide amounted to 2 17 The number of male suicides in Prussia per 10,000 living between the years 1869-90 amounted to 2 73 Farr in his "Vital Statistics" quoted from the tables of the Equitable Assurance Society of 1834 to the effect that about 2 0 per 10,000 assured in that society had been found to commit suicide every year It would thus appear that the number of deaths from suicides among the assured had not materially increased during the last 60 years and that the number among the assured and the community at large in England and Wales was very nearly alike Dr. Muirhead investigated the family history of these 127 suicides so far as it was revealed in the schedules with the remark that inquiry under this heading was limited as a rule to the immediate family—i e, to father, mother, brothers, and sisters The result was that only a very small number (11 in all) of neurotic relatives were disclosed in the family histories of the 127 suicides. Dr Muirhead had made a similar investigation with regard to the importance of heredity in phthisis and had come to the conclusion that the occurrence of both neuroses and phthisis in the family history had been immensely overrated as adverse factors in life assurance

Dr SIDNEY COUPLAND said that people who were chronically insane were protected from the stress and turmoil to which sane people were subject and that no doubt was one reason why many of them lived to a great age, but the general asylum mortality was very much higher than that of the population at large, the average age at death in all insane
therefore se
an indicatio
to premature death Insanity was so often the outcome of physical ill health that its existence in an applicant for insurance would not add anything to the ground for rejection, because the applicant would be rejected on the physical ground An insurance society might be doing an injustice to itself in rejecting an insane person because he was a potential suicide The proportion of suicides in asylums was not very much more than the proportion of suicides amongst the whole of the community

Dr R PERCY SMITH said that there were many patients in asylums whose lives were assurable and would be very profitable to the offices which accepted them The risk of suicide in asylums was very small. General paralytics ought not to be accepted on any condition but unfortunately the disease was sometimes overlooked and he had two or three tim
accepted

Dr R I.. insane, excluding the pauper class and idiots, was about 6 or 7 per cent, that is, about three times the mortality of the general population over the age of 20 years There was an enormous excess of deaths from phthisis in the insane The death rate from phthisis in asylums was 11 times that which was recorded amongst insured males in the Scottish Widows' Fund Assurance Society—namely, 155 against 13 5 per 10,000 The facts were similar with regard to bronchitis and diseases of the heart and kidneys Not only was the death rate from all these cause
occurred at an earlier age than
considered that a family history
ot merely for the risk of the
e proposer, but for the greater
vital weakness might be derived
from the stock, the insanity being an evidence of that weakness

Dr F DE HAVILLAND HALL gave the results of an examination which he had made of the statistical records of the Rock Life Office, extending over nearly the same period of time as Dr Muirhead's statistics and relating to 3066 cases, many remarkable discrepancies, however, existed between his results and Dr Muirhead's For instance, in Dr Muirhead's cases the proportion of general paralysis was five times as great as among his own He was afraid that unless all syphilitic applicants were excluded there would occasionally be considerable losses to insurance
compan paralysis.
He was he suicide
clause, left unprovided for would in some instances act as a deterrent to a would be suicide

Dr S W CARRUTHERS sent a communication which was read by the secretary It was largely statistical and dealt chiefly with the family history of insanity, with the death-rate from insanity among insured lives, with suicide, and with epilepsy

Dr F PARKES WEBER said that two years ago he published a short note on Syphilis in Relation to Life Assurance[1] upholding the view that syphilis was an important factor in the causation of fatal disease. He believed that assurance losses from general paralysis could not be prevented even by declining every applicant presenting a history of syphilis Insured persons attacked by general paralysis either contracted syphilis after insuring their lives or else at the time of insurance they did not know that they had syphilis or wilfully withheld the fact In conclusion he referred to the bearing of agoraphobia and acrophobia on life assurance.

[1] THE LANCET, Sept. 27th, 1902, p 867.

THE LANCET.

LONDON: SATURDAY, DECEMBER 10, 1904.

The Session of the General Medical Council.

THE session of the General Medical Council which came to an end last week was an interesting and important one. As we have already said, it was not marked by any medico-political innovations but the questions arising out of the routine work of the Council, no less than the recurrence of questions that had been previously debated by the Council, became the subject in many cases of important developments. The overloading of the medical curriculum, the place in that curriculum of the preliminary scientific studies, the pecuniary position of the Council, the registration by Act of Parliament of medical students, and the registration of joint-stock companies for carrying on medical practice were all discussed by the Council with an attention to detail that showed the members to be aware of the great interests confided to their charge. The present position of the last two questions is by no means satisfactory and we advise all our readers to study the debates upon them closely, for the political position of the General Medical Council and therefore its utility as a safeguard to the public, may be affected by the existing condition of things. Six months ago the General Medical Council resolved by a large majority to ask the Privy Council to introduce a Bill granting to the General Medical Council power to institute a register for medical students and to charge a fee of £1 for registration. The English Royal Colleges objected to the resolution which to their minds tampered with their corporate prerogatives, but it was assumed that this represented to a great extent the opposition to the suggested legislation. A communication, however, from the Privy Council read at the recent session of the General Medical Council showed that the University of Oxford, though from a different standpoint, shared the feeling of the English Royal Colleges and the Privy Council proposed that the General Medical Council should hold a formal conference upon the subject with the different qualifying bodies. This indicated that the General Medical Council was only likely to obtain the support of the Privy Council for an Act to impose registration upon medical students if the various qualifying bodies were substantially of one mind in the matter. This clearly not being the case the General Medical Council preferred to postpone all idea of the registration of medical students—the only dignified course open to the Council but one which leaves it face to face with growing pecuniary embarrassment. For whatever other advantages or disadvantages the suggested legislation would have had it would undoubtedly have created a source of income for the Council.

The question of the registration of joint-stock companies to carry on dental (and for that matter medical) business was left in a similarly unsatisfactory position. The General Medical Council at the last May session passed a resolution hoping that the Government would take steps—

(*a*) To restrain the registrar of joint-stock companies from registering any new company unlawfully using the term dentist or any similar title which would be likely to lead the public to believe that the members of such company were registered dentists when such is not the case.

(*b*) To prevent companies already registered from continuing unlawfully to use the term dentist or any similar title which would be likely to lead the public to believe that the members of such companies were registered dentists when such is not the case.

(*c*) To prevent in like manner the use by companies of unlawful titles which would be likely to lead the public to believe that the members of such companies were registered medical practitioners when such is not the case.

This resolution was submitted to the Law Officers of the Crown whose opinion has been communicated to the Council through the medium of a letter addressed to the President of that body by the clerk of the Privy Council. This letter, which we publish in full on p. 1654 of this issue of THE LANCET, showed that in the opinion of the Privy Council companies registered for the specific purpose of carrying on medical and dental business possessed a legal medical status. Although the communication applied specially to the practice of dentistry it was evident it did so equally to the practice of medicine, and the medical profession now know on the highest legal authority what the actual position is, the position which we have already described as Gilbertian. And is it not so? The Medical and Dentists Acts were enacted more for the safety of the public than for the protection of medical men and dentists. The primary object of the Medical Acts was to enable "persons requiring medical aid to distinguish qualified from unqualified practitioners"; and that of the Dentists Act to make provision for the registration of persons specially qualified to practise as dentists. Under the Companies Acts these primary objects are disregarded, for power is conferred on unqualified persons to receive official recognition in such degree as to constitute a distinct infringement of the Medical Acts. As we stated in a recent article it is possible under the Companies Acts for seven ignorant persons to become a collective medical or dental practitioner if they take proper precautions. In the letter from the Privy Council these precautions are enunciated. These seven persons must not when applying for registration endeavour to assume the style and title of, let us say, "Quackenboss and Co., medical practitioners and dentists." If they so designate themselves it is held that such form, style, or title might be calculated to deceive and might disentitle the proposed company to registration. The assumption of such a form might be contested as it would be calculated to induce the belief that those who form the company have special qualifications. But (and the "but" is a big one) if these seven persons in the "objects clauses" of their memorandum of association indicate that one of their objects is the carrying on of the business of dentistry, and presumably of medical practice, they are entitled to registration, whether or not the memorandum of association limits the carrying on of the business to persons duly qualified to practise dentistry or medicine. "Quackenboss and Co.," in order that the public may not

be misled, must restrict themselves to the simple style, but in the "objects clauses" of their memorandum they can indicate that they propose to act as medical practitioners or dentists, can advertise their intention, and become registered under Act of Parliament The letter of the clerk of the Privy Council to the General Medical Council contains a suggestion that companies already registered, and offending as to title, should amend their ways by a change of name This can only be interpreted as a suggestion from the Privy Council Office that bogus companies should adopt more subtle methods of carrying out measures, calculated to deceive The Medical Companies Bill Committee of the General Medical Council has made a temperate report upon the extraordinary position and this is by resolution of the Council to be forwarded to the Privy Council, with the result, it is to be hoped, that that august body will see the dangers of the existing situation

A third important matter was discussed during the session with a liveliness verging on acrimony as will be seen by our report this week, for a vigorous debate ensued upon the presentation of the report of the Examination Committee upon the final examination of the University of Edinburgh The final examination of the University of Edinburgh was visited and inspected for the Council by Sir GEORGE PHILIPSON and Mr J BRYANT respectively, and as will be gathered, from the full abstract of the report which we publish, the visitor and the inspector were not able to hold a favourable opinion of everything that they saw Roughly speaking, with three fourths of the proceedings at the final examination as conducted at the University of Edinburgh Sir GEORGE PHILIPSON and Mr BRYANT were satisfied, but with one quarter, the portion of the examination dealing with clinical surgery, they were frankly dissatisfied With regard to that portion of the examination they reported that it was not thorough, inasmuch as the candidate was usually only given one case upon which to display his clinical and therapeutic acquirements, while the circumstances in which he was tested in surgical anatomy and surgical procedure were such as to prevent an adequate display of knowledge or a proper trial of the same It appears that during the visit and inspection of Sir GEORGE PHILIPSON and Mr BRYANT the friends and visitors, male and female of the patients, who were being used both as test cases and lay figures, were being admitted to the wards As a result it was not possible always to expose the patient's body properly in the manner that was essential for examination purposes, so that, as a practical scrutiny of the ability of the candidate to undertake a surgical operation, the examination became wanting Upon this report being received by the Examination Committee of the General Medical Council that committee recommended, having regard to the expressions of approval of much of the examination which the visitor and the inspector had used, that the Council should direct that a further inspection be made of the surgical part Thereupon a debate ensued in the course of which Sir WILLIAM TURNER took the strong line of speaking from the chair as the direct advocate of the University of Edinburgh He appeared to accept as true everything complimentary that had been said about the final examination of the University and appeared to doubt the truth of any of the strictures It is always inconvenient when gentlemen of high standing and position begin to question each other's accuracy and the calling for the diaries of the visitor and the inspector, though doubtless quite in order, introduced an element of awkward personality into the discussion Sir GEORGE PHILIPSON and Mr BRYANT had clearly said that while they were present in the wards observing the candidates being examined in operative surgery visitors and friends of the patients were also present If it is suggested that there were no such visitors and no such friends a serious charge is brought against the accuracy of the visitor and the inspector appointed by the General Medical Council while the admissions of the Faculty at Edinburgh who having read the report of Sir GEORGE PHILIPSON and Mr BRYANT, regret this exact occurrence, appear unnecessary It seems to us that Sir GEORGE PHILIPSON and Mr BRYANT were treated with scant courtesy They made an honest report on what they saw, and some of the remarks which followed upon that report amounted to attacks not only upon their judgment but upon their truth We suppose that the idea of the General Medical Council in sending visitors and inspectors to report on the examinations of the different qualifying bodies is to learn if evils are existent which are remediable These offices will become thankless indeed if the visitor and the inspector are not credited by the Council as a whole with having discharged their important commissions in a single hearted and faithful manner We cannot help feeling that Sir WILLIAM TURNER should have made his own position very clear before taking so strong a line as he did As the representative of the University of Edinburgh it was right and natural that he should try to secure justice for that admirable educational centre The university or corporation supplying the President of the Council ought not to be disfranchised but the President when speaking as a pure representative should be careful to dissociate himself from his presidency

The Etiology of Scurvy.

THE recent return of the South Polar Expedition on board the ship *Discovery* has naturally given rise to a large amount of interest from many points of view The full results of the scientific investigations that were conducted cannot be made known for some time The expedition was compelled to spend two years in the Polar regions, so that observations made in the first year could be checked and completed in the second with all the additional insight derived from the former experience We intend at the present time only to refer briefly to the experiences of the crew in regard to scurvy This disease was fortunately but little in evidence An outbreak occurred while the commanding officer, Captain SCOTT, was absent on a sledging expedition On his return he forbade the use of all preserved food, the scurvy ceased and did not reappear Subsequently the meat eaten was all fresh—namely, penguins and seals According to the opinions of members of the crew penguin is said to be "not bad and seal flesh " A 1

The etiology of scurvy has been the subject of much

discussion on account of its supreme importance in connexion with the health of the crews on ships engaged in long voyages. Since the introduction of steamers, however, the disease has not committed the ravages that were experienced in former years and in the Navy it has practically disappeared. The experience of explorers in the Arctic and Antarctic regions still indicates that unless stringent precautions are adopted the success of the whole expedition may be placed in jeopardy by the appearance of the malady. For many years it has been considered that the want of fresh vegetables is the main etiological factor. As an adjuvant in staving off the disease lime-juice has been held in high esteem. During a discussion at the Epidemiological Society in March last[1] Dr. E. F. WILLOUGHBY referred to the theory elaborated by Dr. TONK of Christiania which has been implicitly accepted by all the medical authorities in the Scandinavian marine. While fully satisfied that the essential pathological factor in scurvy is, as has been shown by various observers, an excess of acidity or want of alkalinity of the blood, Dr. TONK maintains that this condition of the blood does not explain the actual etiology under which this phenomenon is brought about. He therefore suggests that scurvy is due to the presence of some toxic material in the food that has been partaken of. The possibility of such an exciting cause is supported by the fact tha the diet on such expeditions as we have referred to has consisted largely of tinned foods, these being so easily carried on board the ships. Inspector-General ALEXANDER TURNBULL, in opening a discussion on this subject at the annual meeting of the British Medical Association in 1902, declared himself in favour of this hypothesis. Mr. F. G. JACKSON and Dr. VAUGHAN HARLEY[2] have brought forward experimental evidence in favour of the toxin theory. They demonstrated that tainted meat could produce scorbutic symptoms in monkeys even when plenty of fresh vegetables were given at the same time. Against this evidence, however, it is urged that a tainted diet is by no means a common antecedent in human scurvy. Dr. O. EICHHOLZ[3] in commenting on the discussion to which we have referred expressed himself as opposed to the idea that scurvy is due to the consumption of decomposing food and urged in support of his contention that overheating and desiccation of food favour the onset of the disease, whereas such processes are hardly likely to bring about putrefaction. He therefore maintains that scurvy originates in an inadequate supply of fresh food both as regards quantity and quality and that it is immaterial whether the nutriment is of animal or vegetable source.

It is evident that opinions as to the etiology of scurvy are by no means unanimous. The general disposition is to regard the disease as due to the absence of certain elements in the food which is taken, but the exact nature of those elements has not been conclusively demonstrated. Further, it seems probable that a diet of perfectly fresh animal food will supply the deficiencies and will check the spread of the disease. In support of these statements we may quote an interesting account given by Dr. AIKIN in the Memoirs of the Literary and Philosophical Society of Manchester, vol. i., 1785, p. 97. In 1743 a Russian ship was cast away in Spitzbergen and four sailors were accidentally left on the island. They ate three kinds of animals—reindeer, white bears, and foxes. The flesh was partaken of in an almost raw state and without salt and instead of bread other flesh dried hard in smoke was used. "Their preservatives against the scurvy were swallowing frozen meat broken into bits, drinking the warm blood of reindeer just killed, eating scurvy grass when they could meet with it, and using much exercise." Three of the four sailors remained free from scurvy throughout the six years and three months during which they were on the island. The fourth suffered from the disease and died from it in the sixth year. It is remarked that he "was of an indolent disposition and could not conquer his aversion to drinking the reindeer blood." Dr. AIKIN believed that reindeer blood derived its antiscorbutic qualities from the vegetable food of the animal. As we have before mentioned, the view that fresh vegetable food is essential in order to prevent an outbreak of scurvy has been held to be correct for many years. In face of the evidence which has been more recently brought forward, however, it is obvious that considerable modifications of that theory will be necessary and that in future expeditions a continuous supply of fresh animal food will be found to be absolutely necessary in order to prevent the occurrence of the disease.

[1] THE LANCET, March 5th, 1904, p. 657.
[2] THE LANCET, April 28th, 1900, p. 1184.
[3] Brit. Med. Jour., Oct. 25th, 1902, p. 1373.

A Question of Ethics.

A FEELING of unrest appears to pervade the deliberations of the dispensing world, a feeling which recognises the hardness of the lot of those who are harassed by competition and by so-called cutting rates. Companies and stores provide medicines at prices that are impossible or unsatisfactory to the retail dispenser and trade seems, therefore, to be flowing into new channels, leaving the old to bemoan their loss or to seek new sources of profit. Necessarily these conditions cause much uneasiness and this has been reflected in many meetings and in much correspondence. Suggestions for improvement have been made by the leaders of pharmacy who have even striven to give consolation by indicating the profits to be derived from the sale of photographic requirements. The dispensing druggist, while freely adopting the suggestion, rightly feels that his training has fitted him for higher work and turns again and again to the hope of retrieving the position which has been lost. The arguments which are adduced to explain the present state of affairs vary with the speaker and his particular sphere of work. Sometimes the stores and the companies are blamed, sometimes the prevalent taste for the use of patent medicines is held responsible, and often we are brought back to the old grumble about the dispensing of medicines by medical men. Companies and stores must always have a qualified dispensing druggist on the premises to act as "cover" for those under him. He is held responsible for the misdeeds of the unqualified should any errors be made; but at least this principle affords employment to certain individuals who are content to take the risk. From many points of view the method is far from satisfactory, but it has legal support and it is doubtful whether it can ever be altered. With

regard to the use of patent medicines and proprietary articles it does not appear to be certain whether the dispensing druggist is really blameless. No doubt the tendency is largely fostered and developed by bold advertisement but the tempting display of these articles upon the druggists' counters hardly suggests that there is any reluctance in their sale. They are not hidden away and produced only in response to a demand, they are all there in their neat, attractive little bottles, so that all who come for other purposes may be tempted by their appearance. It might even be urged that the production of the P.J.F. (which for our readers we may explain means the *Pharmaceutical Journal Formulary*) scarcely argues an inherent objection to the sale of an article with the name of the maker and without any prescription from a medical man. Still, it is felt that "something is rotten in the state of Denmark," that something is lacking, and that something is the need of a larger number of prescriptions to dispense.

The latest contribution to the subject is the suggestion that an association of dispensing druggists should "approach the medical faculty to enable them to arrive at a right understanding of the medical ethics they should pursue in conducting their business." This proposal has been referred to a subcommittee to report on and perhaps may not be heard of again. The special interest lies in the arguments with which the proposal was introduced. It was urged that something should be done to check the abuse of "hospitals and charitable institutions giving principally medicine," and the writer supported his contention by figures which indicated that while the population had greatly increased the numbers obtaining relief in hospitals had shown still greater increase. It was argued that national prosperity had likewise increased; that in 1873 the gross income for each individual might be calculated at £18 10*s.*, while in 1903 similar calculation would represent the gross income of each individual at £23 10*s.* Surely it is obvious that there is a fallacy connected with these figures. No man with either of these incomes could afford to pay medical fees and dispensing druggists' charges. These expenses can only be provided for by the unequal distribution of property, which must leave many proper recipients of the charitable relief of hospitals. The author of this proposal thinks to enlist the sympathies of those members of the medical profession who are affected by hospital abuse. He generously suggests that medical men should see poorer patients at certain hours at very low fees and that their prescriptions could be dispensed at prices which such patients could afford. He reaches a climax with the innocent statement that this course would relieve dispensing druggists of "the necessity of prescribing, except in very simple ailments and exceptional cases." This ingenuous admission is delicious. A give-and-take principle is proposed, with a little advantage on one side. The ethical question resolves itself into a kind of bargain which is still to leave the dispenser free to assume the responsibility of diagnosing "simple ailments" and of selecting "exceptional cases" to receive the benefit of his advice. We sympathise deeply with the discontent which by a process of fermentation amongst dispensing druggists has led to this effusion but while the writer is to be credited with good intentions and with candour we feel that he has much to learn of professional ethics.

Annotations.

"Ne quid nimis."

EPSOM COLLEGE.

WE print on page 1678 a letter from Sir Constantine Holman, the treasurer of Epsom College, appealing for funds in aid of the Royal medical foundation in connexion with the College. This states that the council has to collect a sum of about £6000 annually to give pensions of £30 a year to 50 aged medical men, or to the widows of those deceased, and to provide a free education, with board and clothing, for 50 sons of necessitous medical men. He observes that no one can doubt that the members of the medical profession are more exposed to risks than members of any other profession and in the case of those living in the tropics and at many other stations abroad these risks are increased. That the institution reaches all classes of the profession may be gathered from the fact that at present there are pensioners residing in Africa, Australia, and France. To maintain the present number of pensioners and foundation scholars is a great strain upon the funds of the charitable side of the work and we understand that the cause of the present financial difficulty is a sudden breakdown in the drainage of the college which was laid some 50 years ago, the result being that a large portion has had at once to be relaid at a very considerable cost. This outlay seriously threatens the ability of the council to continue the relief at present rendered and a simple way out of the difficulty would be to reduce the numbers of both pensioners and foundation scholars. In view, however, of the large number of candidates awaiting election the council is naturally loth to adopt this course and as it has managed with the loyal assistance of friends to maintain 50 of each class for many years past it is most anxious to continue to do this. One important matter which the treasurer is endeavouring to arrange is that governors abroad shall in future have the opportunity of voting at the annual election of pensioners and foundation scholars, a privilege which we are sure will be appreciated. As our readers are aware, the scheme of education at Epsom College is on the lines of a first-class public school; boys are received from all classes and are prepared for every department in life. The college is peculiarly well fitted to receive the sons of medical officers in the naval, military, and civil services. Since 1893 24 open scholarships have been gained at the Universities of Oxford and Cambridge; 80 boys have passed the matriculation examination of the University of London in division 1 (one in honours) and 60 have passed in division 2; 38 have passed the preliminary scientific examination for the degree of M.B. of the University of London, and 41 have passed a part of the examination; 88 higher certificates (with 23 distinctions) and 293 lower certificates of the Oxford and Cambridge schools examination board have been obtained; and 73 boys have obtained South Kensington certificates for drawing. It is hardly necessary to add that not the slightest difference is made between the ordinary paying scholars and the foundationers, the former receiving a first-class education at a most reasonable charge. The treasurer observes that whilst the great schools of England have their foundations in realised property the council is dependent upon the support of friends and well-wishers subscribing year by year to maintain this charity. We cannot shut our eyes to the fact that at the present time there is a universal shortness of money and that medical men generally are keenly feeling this, but this is a cogent reason for urging the council not to diminish the benevolent work at present carried out, and

those who do not already support the college will, we trust, respond to the appeal of the treasurer at the present crisis.

PRESCRIPTIONS FOR POISONS.

A RECENT inquest held by Dr. G. Danford Thomas once more furnished evidence of the serious risks incurred by patients who have been supplied with prescriptions for morphine or other dangerous drugs. In this case the prescription had been given 18 years ago for an ailment from which the patient recovered but from that time she had continued to inject morphine with a hypodermic syringe in spite of repeated warnings from her medical attendant. An attack of bronchitis supervening the patient succumbed from an overdose of morphine which had not apparently been taken with suicidal intent. A dispensing chemist stated that, pursuant to the prescription, he had supplied the deceased with the drug for three years and that he was bound to do so by law. The coroner remarked upon the dangers of the present system which affixed no time-limit to the prescription. He said that it had been suggested that a medical man giving a prescription to a patient should, in affixing the date, state that the particular poison should not be supplied again by the druggist after the lapse of a week and with the need of an amendment of the existing law and practice the jury concurred. The majority of cases of poisoning with opium or morphine may be broadly divided into two classes: in the first the poison has been taken by a medical practitioner or a druggist and no legislative measures can be taken to reduce the risks of this class; in the second and larger class the drugs have been obtained by the abuse of a prescription. Since dispensers maintain that they are powerless in this respect it would be well for the medical profession to come to some agreement upon the matter. All prescriptions are dated. Might not those containing poisons be treated like railway tickets which are only available for a limited period from the date of issue? There are obvious objections to indicating on a prescription to be handed to a patient that the drugs are dangerous to life.

NOVEMBER AT HOME AND ABROAD.

THE appended table affords a general view of the state of the weather experienced at several of the southern winter resorts during the past month, and for purposes of comparison similar data have been given for Paris and for London and a few other places in this country. In only one of the southern resorts was the temperature equal to that of an average November and that was Algiers, the farthest south. Everywhere else the weather, after the first fortnight, was cold for the time of year and in many localities also very unsettled. It will be seen by the lowest temperatures for the month that frost was experienced at Nice, Biarritz, Florence, and Rome, and that Naples only escaped by the narrow margin of two degrees. At Biarritz frost occurred on two separate occasions and at Nice and Florence on four. The severity of the weather at Florence can be judged by the fact that its lowest temperature reading (recorded on the 30th) was only one degree above the minimum in London and three degrees lower than that at Torquay. Next to Algiers, Lisbon had the highest mean temperature, and that was followed at a respectful distance by the Sicilian resort of Palermo, while the daily mean at Florence and the Nice observatory was lower than that at either Jersey or the Scilly Islands. The average of the daily maximum and minimum temperatures at Algiers was slightly higher than the corresponding values at Jersey during the months of July and August, while Naples had the average temperature of the same island during the early days of May. When the equability of the temperature is considered the best of the foreign localities were Naples and Algiers but in that respect they were both inferior to the Scilly Islands and Jersey. With regard to the rainfall Biarritz far outstripped all other places and, with Jersey, had the greatest number of days with rain. The driest spots in the south were Nice and Rome. Nice and the Riviera generally had a good deal of sunshine—doubtless more than any of the home stations—but the actual figures are unfortunately not available. Among the English places none compare with Torquay and Jersey, while the dullest spot was not London but Nottingham. Torquay was particularly bright for such a dismal month as November. During the cold and rough weather for the last fortnight it was the most sunny spot in the United Kingdom.

Temperature and Rainfall.

—	Highest temperature.	Lowest temperature.	Mean daily maximum.	Mean daily minimum.	Mean daily temperature.	Total rainfall.	Number of hours of sunshine.
Nice	63	30	56	42	49 0	0 87	—
Biarritz	64	28	57	44	50 5	7 64	—
Florence	64	25	54	40	47·0	1·90	—
Rome	67	30	58	43	50·5	1·59	—
Naples	66	34	57	46	51·5	3·32	—
Palermo	78	40	61	48	54·5	3·22	—
Algiers	79	45	70	58	64 0	2·38	—
Lisbon	73	41	63	50	56·5	4 57	—
Paris	60	25	47	34	40·5	0·44	—
London	60	24	43	36	42·0	1·47	31
Scilly Isles	59	37	53	46	49·5	2·38	65
Jersey	60	32	53	43	48 0	3·40	92
Torquay	60	28	52	41	46 5	1·55	97
Bath	58	21	49	35	42·0	1 86	56
Nottingham ...	60	13	47	33	40 0	0 87	26

THE DIAGNOSIS OF CEREBRAL SYPHILIS.

AMONG the symptoms dependent upon cerebral syphilis there are none that belong exclusively to that affection. It is rather by the history of the case, by its early stages and course, and by the grouping of symptoms that a probable diagnosis can be made. There is often an irregularity in the phenomena which shows that there must be more than one focus of disease and sometimes the symptoms have a peculiar ephemeral character with remissions and variations. In the *Boston Medical and Surgical Journal* of Nov. 3rd Dr. S. G. Webber calls attention to the more important diagnostic points and illustrates them by a series of cases personally investigated during the past few years. The symptoms of syphilis of the brain and spinal cord are, says Dr. Webber, manifold as seen in different patients. The first of the group of symptoms to be recognised is headache. This is the earliest in appearance and should give timely warning of danger to be avoided. Its characters are great severity of the pain which is almost uninterrupted or occasionally marked by remissions. In many instances the pain is most severe in the evening or at night. It may be local, bilateral, or diffuse, and is very like the headache of cerebral tumour, except that nausea, vomiting, and vertigo are absent. This headache is relieved by moderate doses of the alkaline iodides. Convulsions, sometimes closely resembling *petit* or *grand mal*, constitute the second group of symptoms. It is at times very difficult to determine the syphilitic origin of such attacks. "If they begin after early adult years, and especially if headache has preceded the convulsions for any length of time, syphilis should be suspected." One attack is described as follows in a patient who "suddenly

became dizzy, put his hands to his face, crying out, 'Oh, my head,' and then dropped unconscious, with spasms of the face and eyeballs, clenched teeth, and darkly flushed face." Partial monospasms are commoner, however, than such convulsions and their presence indicates irritation of limited cortical areas. Three such cases are recorded of the latter, all of which recovered under treatment with potassic and mercuric iodides. A third class of symptoms includes hemiplegia, or a gradually increasing hemipiresis beginning with attacks of unilateral weakness which come and go accompanied by paræsthesia of the affected parts and preceded by headache. Even in cases of syphilitic paralysis of the cranial nerves motor weakness of the limbs is commonly present. The oculo-motor nerves are the most frequently affected of the cranial nerves, the disturbances of their function being partial and irregular. The facial and hypoglossal nerves are less affected and the special senses of sight and hearing are generally normal. Headache or trigeminal neuralgia precedes or accompanies the oculo-motor disturbance. Aphasia may be present with spasm or paralysis of articulation and after other cerebral symptoms have subsided the difficulty of speech may remain. Three illustrative cases of this are recorded. The fourth class of symptoms comprises syphilitic myelitis which is less frequent than cerebral syphilis. "There are no special symptoms indicating syphilitic as distinct from other lesions of the spinal cord." The prognosis of spinal syphilis is less favourable than that of cranial syphilis. The pseudo-tabes of syphilis is curable and is not a true tabetic degeneration. A case is recorded of a woman who developed it with weakness of the legs, inability to walk, shooting pains in the limbs, and "girdle sensations." The knee-jerks were absent and there was ataxy of gait. She recovered under treatment with potassium iodide and mercury (her physician knew that she had had syphilis) In another case, that of a man aged 35 years, similar treatment produced only a partial arrest of symptoms; he died shortly afterwards with paraplegia (left-sided). The fifth and last group of symptoms includes a primary neuritis of the peripheral nerves, occasionally caused by syphilis, but possessing no special diagnostic features. "In the treatment of syphilis of the nervous system," concludes Dr Webber, "it is necessary to act with vigour. In slight cases potassium iodide, ten to 15 grains, may be given in three doses daily to relieve the headache. This should be continued for some months after pain has ceased. When the symptoms become serious the dose should be increased to 20 or 25 grains, and together with this mercury should be administered by inunction, the latter process being adopted when it is desired to make a rapid impression" Iron and cod-liver oil are also recommended to be given to combat the anæmia which is usually present.

AUSTRALASIAN MEDICAL CONGRESS.

THE seventh session of the Australasian Medical Congress will be held in Adelaide from Sept. 4th to 9th, 1905, under the presidency of Professor E. C. Stirling, C.M.G., M.D. Cantab., F.R.C.S. Eng., F.R.S. Among the patrons of the Congress are the Governor-General of the Australian Commonwealth, the late Governor-General, the Governors of New South Wales, Victoria, Queensland, South Australia, Western Australia, and New Zealand, and the Administrator of British New Guinea and the Chief Justice and Lieutenant-Governor of South Australia. The vice-presidents number eight medical men, six of whom have been presidents of past Australian Congresses, while the two remaining are respectively the Director-General of the Army Medical Services of the Commonwealth, Melbourne, and the senior naval medical officer on the Australian station, Sydney. The Congress will be divided into seven sections—viz., (1) Medicine; (2) Surgery; (3) Gynæcology and Obstetrics; (4) Eye, Ear, and Throat; (5) Pathology, Anatomy, Physiology, and Pharmacology; (6) Public Health; and (7) State Medicine and Medical Ethics. The presidents of the sections are: (1) Dr. Daniel Colquhoun, Dunedin; (2) Dr. F. D. Bird, Melbourne; (3) Dr. W. S. Byrne, Brisbane; (4) Mr. A. J. Brady and Dr. W. Odillo Maher, both of Sydney; (5) Professor D. A. Welsh, Sydney; (6) Dr. W. G. Armstrong, Sydney; and (7) Dr. G. A. Syme, Melbourne. Each section has six vice-presidents and a medical secretary or secretaries, and there are also six State secretaries of the congress—all medical men The executive committee is composed of 20 members, including the president, a vice president, treasurer, general secretary, associate secretary, the eight secretaries of the sections, and seven others. The general secretary is Dr. B. Poulton, North-terrace, Adelaide, South Australia. It is announced that the railway departments of Australasia will issue concession tickets to members and their wives for the return journey at single rates on presentation of certificates from the State secretaries of Congress countersigned by the railway authorities, and also that it is anticipated that reductions in fares similar to those granted in previous years will be made by the Interstate Steamship Companies.

WHAT IS BRANDY?

IT is satisfactory to learn that proceedings taken against wine merchants, publicans, and others for selling under the name of brandy a spirit which is not entirely derived from grape wine in the pot-still continue to be successful. The conviction obtained in the great test case at Islington has led to the adoption by the trade of a label on the bottles of the so-called cheap brandies to the effect that the spirit cannot be guaranteed as being derived solely from grape juice. So far, therefore, good has been done, inasmuch as the public are at least made aware of the nature of the spirit which is supplied. Occasionally in the defence it is stated that the bottle by some oversight had escaped the labelling process. In a summons taken out at the instance of the Holborn borough council this week such was the excuse. The magistrate convicted in three instances and fines and costs were imposed. We are glad to find that these proceedings are commonly based on the definition that brandy is a spirit distilled from grape wine in the pot-still. We hold this to be the correct description of genuine brandy.

INFANTILE MORTALITY IN FRANCE.

WE learn from a recent number of the *Moniteur de la Flotte* that the French Minister for Marine Affairs has sent round a circular to the maritime prefects inviting them to give their personal support at the ports under their control to the institutions, briefly entitled "Consultations de Nourrissons," which are designed to afford aid to the newly born as well as advice to their parents and guardians. In order to favour the extension of institutions of this description, some of which are known as "Gouttes de Lait," M. Pelletan, after conferring with Dr. Ausset, one of the professors in the Faculty of Medicine at Lille, has charged that gentleman in conjunction with one of the permanent officials of the Marine Ministry, to found a "consultation" in each of the five principal naval seaports. This decision is the outcome of a resolution passed by the Senate towards the close of last year in which the Minister of the Interior is directed to bring to the notice of all general councils Professor Pierre Budin's report addressed to the Academy of Medicine on infantile mortality. What is required, said Professor Budin, is the encouragement in every possible way of breast feeding, the giving of advice to mothers, the attentive superintendence and direction of

nurses, together with weekly or fortnightly weighing of infants, and watchfulness to insure their receiving good milk. In this way medical men can bring about the disappearance of the most fruitful cause of infantile mortality—namely, diarrhœa. "Consultations de Nourrissons" were first started in 1892, when Professor Budin opened one at the Charité Hospital. Since then they have spread all over France, first in the hospitals and next as annexes to the dispensaries. Private enterprise then took the matter up in Paris and finally the system took root in the departments. The results have been so satisfactory that according to the departmental inspector of Seine-et-Oise it may be affirmed with confidence that of all the measures for dealing with the dangers that menace early infancy which have hitherto been adopted these consultations are by far the most powerful. The field is truly enormous seeing that fully one-half of the disease which causes the mortality among young children is preventable. In a preface to Professor Budin's work "Le Nourrisson" M. Jonnart writes to the following effect. To create a "Consultation de Nourrissons" three things suffice: a weighing machine, a milk steriliser, and the devotion of a medical man. The premises usually contain three rooms: a waiting room, one for inspection and weighing, and a third for the distribution of milk. These rooms require warming in winter. The furniture should comprise a few benches or stools, a table for the balance, another for the medical man to write on, and one or two chairs. It is also desirable that a set of pigeonholes should be available for the classifying of documents having reference to weight and milk distribution, the latter being the sole source of expenditure in connexion with the institution. The medical man plays the capital rôle. It is to the devotion of the medical body that it seems suitable to have recourse for the protection of infant lives.

THE STUDY OF THE HISTORY OF MEDICINE.

IN a presidential address delivered before the Medical and Chirurgical Faculty of the State of Maryland on its 105th anniversary Dr. Eugene F. Cordell took for his subject the Importance of the Study of the History of Medicine. Rightly did he lament how meagre was the teaching of this subject in the medical departments of the universities of the States. He wrote for information to fourteen of these and the result of his inquiry was that he was enabled to state that in only three—namely, the Universities of Pennsylvania, Maryland, and Minnesota—was there a full course of lectures on the history of medicine. Johns Hopkins Hospital, however, has a historical club which does excellent work in furthering the study of medical history by assembling for the reading of papers. Harvard University attempted a course of lectures but "no interest was shown" and the course was abandoned. It may be some comfort to Dr. Cordell to know that in these islands the position so far as regards the teaching of the history of medicine is still worse, for so far as we know no university or teaching school of medicine deals with the subject in any way. The only course of lectures known to us is that recently founded by the widow of the late Dr. FitzPatrick at the Royal College of Physicians of London, two courses of which have been already delivered by Dr. J. F. Payne. Dr. Cordell proceeded in his address to show that a study of medical history taught us what and how to investigate; that it was an antidote for error, egotism, and despondency; that it increased knowledge, broadened the view and strengthened the judgment; that it was a mine from which many neglected or overlooked discoveries might be brought to light; and that it taught us to cherish our best traditions. With all this we thoroughly agree but the unhappy student in this country is at present so overloaded with subjects for his curriculum that we fear that it is but vain to expect another subject to be included. But a beginning might be made if those universities which demand a thesis from their graduates in medicine should all demand a historical retrospect of the subject, as indeed at least one of them does at present. Those which demand that the would-be graduate should pass an examination without a thesis might include a paper upon medical history which would at least insure that the student knew something of the past of his profession.

THE LECTURES AT THE ROYAL INSTITUTION.

THE preliminary programme of lectures to be delivered before Easter at the Royal Institution has just been issued. The Christmas course, which is always specially adapted to a juvenile audience, will be given by Mr. Henry Cunynghame who will take for his subject "Ancient and Modern Methods of Measuring Time." Among the other announcements are six lectures on Adaptation and History in the Structure and Life of Animals, by Professor L. C. Miall; three lectures on Some Recent Biometric Studies, by Professor Karl Pearson; two lectures on Synthetic Chemistry, by Professor R. Meldola; three lectures on Electrical Properties of Radioactive Substances, by Professor J. J. Thomson; and three lectures on Some Controverted Questions of Optics, by Lord Rayleigh. The Friday evening meetings will begin on Jan. 20th, when a discourse will be delivered by Sir James Dewar on New Low Temperature Phenomena.

PNEUMOCOCCIC ENDOCARDITIS.

IN the *American Journal of the Medical Sciences* for November Dr. H. B. Preble has published three cases of pneumococcic endocarditis and exhaustively reviewed the literature of the subject. His paper is opportune because no extensive review of the subject has been made since Netter's contribution in 1885, in which 82 cases were mentioned. 50 cases have subsequently been reported. The frequency with which pneumonia is complicated by endocarditis cannot be positively stated because in a certain proportion endocarditis is unrecognised and the patients later come under observation suffering from chronic heart disease. The percentages given by various writers vary from 0·06 (Aufrecht) to 16·0 (reported by Osler in 100 fatal cases of pneumonia). The percentage of pneumococcic cases in all forms of infectious endocarditis is 22. As to the valves affected, out of 141 cases (including in addition to the 132 clinical cases mentioned above nine in which only the valve affected and the relation to pneumonia are stated), the aortic valves were affected alone in 56; the mitral alone in 40; the aortic and mitral in 20; the tricuspid alone in 12; the pulmonary alone in five; the aortic, mitral, and tricuspid in five; the mitral and tricuspid in two; and the aortic and tricuspid in one. It has been said that infarcts are exceptional, but in 20 of the 50 cases added to those of Netter infarcts were found in the spleen, the kidney, the lungs, the brain, or the intestine. Endocarditis complicating pneumonia is frequently associated with meningitis. Netter found this association in no less than 45 cases out of 63. Meningitis is a much commoner complication of pneumonia than is endocarditis. The influence of antecedent endocarditis as a predisposing cause of pneumococcic endocarditis is considerable. Old endocarditis upon which recent vegetations had been found was seen in 12 out of the 50 cases. Other predisposing causes are alcoholism, anæmia, debility, and malnutrition. Clinically the cases may be divided into two groups—those which are latent—i.e., in which there are no symptoms indicating endocarditis—and those in which the diagnosis is possible. The first group is the larger. In pneumonia frequent examinations of the heart should be made to detect a murmur. But, as in other fevers, systolic murmurs

may occur without endocarditis Diastolic murmurs, on the other hand, indicate endocarditis The symptoms of pneumococcic endocarditis do not differ from those of other forms of endocarditis There usually is pyrexia, in rare instances it is absent Lesage and Pineau have reported a case of three months' duration without any rise of temperature Generally the temperature is very irregular, being interrupted by chills, and rising frequently to 104° or 105° F But sometimes there is continuous or regularly remittent fever The pyrexia of the pneumonia may pass into that of the endocarditis, but often there is an interval of a few days in which there is apyrexia In 20 cases this interval varied from a portion of a day to 12 days The duration of the pyrexia varies from a few days to months In 109 cases the total duration of the illness (it was impossible to fix the onset of the endocarditis) ranged from seven to 180 days and averaged 30 days The pulse rate may correspond to the temperature or be more rapid or there may be bradycardia Subjective symptoms referable to the heart are the exception and are nearly always the result of an old lesion Physical signs are absent in many of the cases In a certain proportion pericarditis develops Changes in the area of cardiac dulness are found only in a small proportion of the cases Arthritis is a frequent complication* The number of cases in which pneumococci have been found in the blood is only nine but they have not been searched for sufficiently frequently Pneumococcic endocarditis may occur without pneumonia, then the diagnosis can be made only by finding pneumococci in the blood The gravity of the prognosis is shown by the fact that recovery took place only in four out of the 132 cases The treatment should be conducted on general principles The following is one of the cases reported by Dr Preble A man, aged 35 years, was admitted into hospital on the fourth day of an attack of pneumonia of the right lower lobe There was alcoholic delirium The temperature was 100 6°, the pulse was 120, and the respiration was 40 The leucocytes were 10 000 Examination of the heart was negative On the ninth day the temperature was normal and the patient apparently was convalescing On the thirteenth day there was a severe chill and the temperature rose to 103 2°, physical examination was negative On the sixteenth day a systolic murmur was heard at the apex The temperature ran an irregular course, often reaching 104° to 105°, and was interrupted by chills The number of leucocytes fell to 6750 and though the blood was repeatedly examined for pneumococci none were found until the thirty second day During the night of the thirty first day a petechial eruption appeared Death occurred on the forty second day The murmur persisted until death At the necropsy the lungs were found to be almost normal, the affected lobe being only a little firmer than the others The heart was of normal size but showed three or four small sub pericardial hæmorrhages On the mitral valve was a polypoid, dirty greenish irregularly granular, firm vegetation of the size of a hazel nut Along the line of closure of the leaflets were vegetations of the size of a pinhead In the spleen and kidneys were infarcts Smears from the vegetations showed pneumococci in large numbers

DR ARBUTHNOT AND DEAN SWIFT

THE mysterious fits of giddiness that puzzled and tortured Dean Swift until the final darkness of insanity settled upon him are now almost proved to have been due to labyrinthine vertigo, a disease discovered by Ménière after experiments upon animals The famous Dr Arbuthnot made light of these attacks which shattered Swift's strength for days "Pope and I," he writes in 1730, 'have had the distemper these 30 years I have found that steel, the warm gums, and the bark, all do good in it Arbuthnot's tremendous prescriptions in Swift's case are as follows "*A* ℞ pulv rad ipecacuanae, ℈j *B* ℞ conserv flavedin aurant absynth Rom ana ℥vj, rubigin martis in pollin redact. ℥iij syrup e succo kermes, q s *C* ℞ as fœtid ℥iij tinctur castor q s M fiant pilulæ xxiv *D* ℞ cortic peruviani elect rubigin martis ana ℥j digere tepide in vini albi Gallic lbiij per 24 horas postea fiat colatura. *E* ℞ sp cor cerv sp lavendul tinctur castor ana ℥ij misce" "Take the first vomit *A*,' says the good physician, "then, every day, the quantity of a nutmeg, in the morning, of the electuary, marked *B*, with five spoonfuls of the tincture marked *D* Take the tincture, but not the electuary in the afternoon You may take one of the pills marked *C*, at any time when you are troubled with it, or 30 of the drops marked *E* in any vehicle, even water I had a servant of my own that was cured merely with vomiting' Both Swift and Pope placed the utmost reliance in Arbuthnot and often expressed their gratitude to him, the latter poor once in well known lines It is noteworthy that Arbuthnot when prescribing for Swift only thought to cure headache

CHRONIC INTUSSUSCEPTION SIMULATING DYSENTERY

IN the *Journal of the Royal Army Medical Corps* for November Captain R Bruce Barnett, R A M C, has published a rare and remarkable case in which chronic intussusception simulated dysentery A soldier aged 24 years, was admitted into hospital for varicose veins of the legs but refused operation He complained of passing blood per rectum He suffered from chronic constipation and was in the habit of using purgatives For some months he had been passing blood but it troubled him so little that he did not seek advice His "medical history sheet' showed that he was 35 days in hospital in South Africa for dysentery which was treated with salines In the last year he was in hospital for 47 days and was treated for "ulceration of the rectum On rectal examination Captain Barnett found nothing abnormal The stools were offensive fluid or semi fluid, and usually contained clots and fluid blood Occasionally there was no blood in the stools passed first in the morning but the subsequent ones were almost pure blood The number passed in the 24 hours varied from one to six or eight At no time was a solid motion passed The urine was normal The tongue was clean and the temperature was normal The abdomen was rather empty and retracted and palpation revealed nothing At times there was a little abdominal pain which varied in position Tenesmus immediately before passing a stool was sometimes present The patient was carefully dieted on peptonised milk, strained soups and beef juice, and was given from ten to 20 grains of pulvis ipecacuanhæ four times daily combined with a little extract of belladonna 15 minims of tincture of opium being administered a short time before taking each dose according to the usual Indian method of treating dysentery The bowels were also acted upon by small doses of calomel, castor oil, sulphate of magnesium, and other drugs which always gave relief When the blood passed seemed excessive an astringent mixture containing turpentine, hamamelis, and gallic acid was given As this treatment was not successful the lower bowel was frequently washed out with hot boric solution, after which injections of from one to two pints of a solution of nitrate of silver (half a grain to the ounce) were given with tube and funnel twice daily For a time the patient appeared to improve under this treatment He was troubled with sickness and retching which were attributed to the ipecacuanha The stools became less numerous and less offensive and contained more fæcal matter and less blood He slept better but appeared to be losing flesh On

gnawing at a piece of old dried gnu skin to allay the pangs of hunger, and he adds that "in the last resort they tighten the girdle"; again, we read how in times of want the Esquimaux eat almost anything, not hesitating to make soup of their tent-skins and even their old trousers!

In short, the pre-cibiculturists are liable to great fluctuations in the quantity of food at their disposal, sometimes being surrounded by plenty, when they are apt to glut themselves, and at others compelled to subsist on very slender rations, and even to go for days together without any food whatever. This having probably been the fate of our own ancestors for many hundreds of generations it may well have produced a racial effect—i.e., the human organism may have become so attuned to a diet which varies in quantity at different times of the year as to thrive best on such a one. And we may well consider whether it might not be better for us 15-grade humans, instead of taking the same quantity of food each day occasionally to vary its amount, sometimes greatly diminishing the daily allowance and at others indulging in a feast.

Even when a plentiful supply of food is available for the pre-cibicultural man it by no means follows that he is able to lead an indolent life; food does not, save in the land of Cockaygne, drop unasked for into his mouth, but has to be toiled for. Indeed, the food quest and the preparation of food loom large in the life of the pre-cibiculturist—absorb, in fact, his chief energies. There may be an abundance of game, but it needs to be hunted; the river may teem with fish, but the fish must be caught; nutritious seeds and roots may be plentiful, but they have to be gathered; finally, the vegetable food has to be prepared in ways which often involve much time and trouble. Thus pre-cibicultural man has to work for his food even though it be abundant. He lives an active life, his food is simple and does not tempt to excess, and even if he has bouts of gourmandising he also has intervals of enforced starvation. Hence though in seasons of plenty he may get plump he is seldom obese and rarely suffers from the other evils of excessive eating.

The seasonal rotation of food.—Season has a much greater influence on the diet of the pre-cibiculturists than on our own. The food of the former varies from month to month, nay, even from week to week. Thus we find the Californians in the early part of the year eating the bark of trees, then in due course clover, next roots, and about the middle of summer, salmon; thereupon various kinds of seeds come in season, then manzanita berries and pinon nuts, and finally acorns; while game and vermin of various kinds are consumed throughout the year. There is no such pronounced seasonal rotation of food among communities living in the modern cibicultural age. With the manifold facilities at our disposal for artificially producing, storing, and rapidly conveying food from place to place, we moderns are able to subsist upon much the same kind of food throughout the year. Butchers' meat, bird, fish, bread, rice, milk, cheese, butter, eggs, sugar, and some vegetables—e.g., potatoes—are available at all seasons. It is only in respect of certain highly perishable vegetable foods, such as green vegetables and certain fruits, that the influence of season makes itself decidedly felt and this influence is every year becoming less and less, now that new methods of storage are being constantly devised and more rapid means of transit from remote parts are provided.

The fact that we are descended from an ancestry whose diet has for untold ages varied considerably throughout the year may help to explain the evil effect of a monotonous diet and the advantage of varying it from time to time. This truth in well illustrated in the case of anthropoid apes kept in captivity; the keeper in charge of these apes at the London Zoological Gardens tells me that he finds it necessary constantly to vary their food, for if he does not, they get out of health; obviously under natural conditions it undergoes considerable seasonal change. We shall do well to bear this principle in mind when called upon to regulate the diet of our patients.

Domesticated animals.—The earliest animal domesticated by man is undoubtedly the dog. With the exception of the Andamanese all the pre-cibicultural peoples were already in possession of the dog when discovered by the white man. Dogs are employed in the hunt and are said to help the Australian natives in finding snakes, rats, and the like; the Veddahs train their dogs to follow up and to pull down the wounded deer. That the pre-cibiculturist may display affection towards the dog is evidenced by the fact that an Australian woman was seen crying over one that had been stung by a snake.

Feeding of infants among pre-cibiculturists.—It need scarcely be said that there is no artificial rearing of infants among the pre-cibiculturists: either the child is brought up on the mother's milk or it perishes. Hence mothers unable to suckle their children do not leave any offspring to inherit the incapacity. As to when the child begins to take other food and what the nature of the food is I have no information. Infants in Central Australia are often not weaned until they reach from two to three years of age. During this time they are given whatever they can eat, "except," one writer tells us, "certain kinds of vegetable foods which are likely to disagree." The Bushwomen nurse their children for a long time, but are said from the very first days of life to feed them upon chewed roots, meat, and other hard foods.

Time of meals.—The pre-cibiculturists do not appear to have any fixed time for meals. It is expressly stated of certain Californian tribes, of the Ainus, and of the Esquimaux that they eat at any time. Of the latter it is stated that "they did not eat all at once but each man when and as often as the impulse prompted him."

Miscellaneous facts.—Some Californian tribes eat dried whale-bone for dyspepsia, doubtless for the gelatin which it contains, on the same principle that isinglass is given as a household remedy for dyspepsia in our own country. The Californians have a custom of tying a lump of meat to a piece of string and after swallowing the meat pulling it up again, a process which they repeat ten or a dozen times, the better to enjoy the taste of the morsel.

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This completes our survey of the evolution of man's diet from anthropoid times to the beginning of the cibicultural period. The changes which his food has undergone during this latter period will, it is hoped, be dealt with on another occasion.

(Concluded.)

ASYLUM REPORTS.

London County Asylum, Banstead (Report for the Year ending March 31st, 1904).—The average number of patients resident during the year was 2450, comprising 1075 males and 1375 females. The admissions during the year amounted to 509—viz., 243 males and 266 females. Of these 439 were first admissions. Dr. D. Johnston Jones, the medical superintendent, states in his report that, as regards causation, alcoholic intemperance was the predisposing or exciting cause in 23·4 per cent. of male admissions and in 12·4 per cent. of females. Heredity, venereal disease, adverse circumstances, the menopause, epilepsy, and old age were the other chief causes, either predisposing or exciting. The large majority of cases admitted were those suffering from a first attack and admitted within three months of the onset of the disorder; they formed also the larger proportion of the recoveries. Two female patients who were pregnant on admission were safely confined and the children were removed to the care of friends. "The mental condition of both patients," adds Dr. Jones, "has improved considerably." The number of patients discharged as recovered during the year amounted to 203—viz., 96 males and 107 females, or 8·3 per cent. of the average number resident. The deaths during the year amounted to 189, or 7·7 per cent. as calculated on the same basis. Of the deaths nine were due to cerebral hæmorrhage, ten each to cancer and senile decay, 11 to pneumonia, 14 to epilepsy, 24 to cardiac disease, 31 to pulmonary and other forms of tuberculosis, 38 to general paralysis, and the rest to other causes. There were no inquests held during the year and the only serious casualties were four simple fractures of bones and two dislocations, all due to accidental causes, and all made good recoveries. The general health of the inmates has been satisfactory on the whole. "A large number of helpless—almost bedridden—cases have been admitted and

these, together with the numbers of general paralytics, who are utterly helpless and faulty in their habits, render the work of nursing on the male side much more anxious than formerly' As a precaution against fire extra emergency doors have been made, opening outwards from the recreation hall and stage to the grounds the stage scenery has been made fireproof extra exits have been made from the infirmary wards (ground floor) to the fire staircase, and the doors to the latter have been improved 'Communicating doors have been made between three of the bedrooms of the villa and an extra water supply will shortly be available from Sutton The Commissioners in Lunacy state in their report that the day rooms were in good condition and that the dormitories were clean and bright The state of the bedding was also satisfactory The general health of the institution was good and the dress and personal condition of the patients were for the most part satisfactory The medical case books were well and creditably kept The committee of management states in its report that during the year advances have been made from the surplus balance of the asylum to the maintenance accounts of Cane hill Claybury and Colney Hatch (£2500 each), and the Epileptic Colony, Ewell (£5000) The farm account shows a credit balance of £575 The expenditure on repairs alterations and improvements during the year amounted to £8126

(Annual Report for
of patients resident
303 males and 317
ar mounted to 200—
viz 106 males and 94 females Of these 181 were first admissions Dr W F Menzies the medical superintendent states in his report that 104 of the admissions were of a non recoverable character including congenital imbeciles and epileptic patients senile and degenerative forms of insanity and general paralysis The total number of recoverable cases is estimated at 96 Pulmonary tuberculosis was present in 20 of the admissions, "a proportion which is high enough to make it doubtful whether so much of asylum phthisis as has been hitherto supposed is due to infection after admission' The number of cases of alcoholic insanity was 59 comprising 46 males and 13 females Early in the year it was decided to segregate all cases of tuberculosis and this has been done by setting apart one ward on each side 'The two wards have been practically filled throughout the year and in many ways this method, says Dr Menzies, is more convenient than the provision of open air shelters and is certainly cheaper, though no doubt hardly so efficient The windows are all kept open night and day, the patients are outside in the airing court set apart solely for their use or walking round the grounds for a minimum of six and three quarter hours per day These patients never enter the main body of the asylum, they do not come to the dining hall or entertainments or church or the visiting room A special weekly service is conducted and entertainments given in the hall are repeated in the ward, where also the patients are visited by their friends The number of patients discharged as recovered during the year amounted to 61—viz 37 males and 24 females or 9 8 per cent of the average number resident The deaths during the year amounted to 86 or 14 per cent as calculated on the same basis Of the deaths three each were due to senile decay, epilepsy and cardiac disease five to pneumonia ten to renal disease

ments have been made in the ventilation of the stores and laundry Three cases of enteric fever and four of erysipelas occurred during the year all of which recovered The Commissioners in Lunacy state in their report that the patients were found to be dressed neatly and suitably that the asylum was in excellent order throughout that the wards were bright and comfortable that the dormitories and bedding were in a satisfactory condition and that the medical case books and records were very carefully kept In addition to a considerable number of minor improvements we noticed with great satisfaction the improved ventilation of most of the single rooms and we are glad to learn that this work will shortly be completed throughout the asylum The committee of management states in its report that the fire brigade has been kept as far as possible efficient and that further planting has been done along the new road and outside the airing courts, adding to the beauty of the grounds

NOTES FROM INDIA

(FROM OUR SPECIAL CORRESPONDENT)

Improvements for Madras City—The Destruction of Life by Snakes and Wild Animals—The Plague Epidemic—The Unhealthiness of the City of Poona

As Madras city has for so long been allowed to remain in an insanitary condition it is satisfactory to find that improvements are in progress and that several sanitary works are under consideration The Madras municipality will soon be changed for a corporation with a new Act and constitution The chief scheme is a great drainage scheme already commenced This consists of a large cast iron sewer nine miles long with six collecting wells situated at intervals of about one and a half miles into which cement pipe sewers receiving sewage from the streets will enter The main sewer debouches on to a large tract of land which is already partly irrigated by the separate sewage installation of Black Town, and it is to be further extended to an area of some 200 acres, so as to make a valuable sewage irrigated grass farm The pumping stations near the collecting wells are under construction and the sewage will be pumped into the main sewer The cost of the drainage scheme will be at least half a crore of rupees Five pumping stations are expected to be ready by the next hot weather and should thus remove the offensiveness of the present open drains The Black Town area of Madras has its sewage scheme at work The sewage is collected into a well from which it is pumped to the area above referred to The water of the seven wells by which the Fort is supplied was suspected to be contaminated by sewage and a leaky sewer was discovered in close proximity Amongst other improvements a new bullock slaughter house is approaching completion There are also other works under consideration First may be mentioned the water supply upon which several schemes have been prepared At last the Government has been asked to lend an officer to revise the proposals and to prepare a final scheme One or two dhobikhanas (washhouses) are talked about also a cattle market a municipal cattle shed and a sheep slaughter house

Strenuous efforts are being made to reduce the loss of life annually occurring from snake bite but the death roll is at present very heavy The human deaths last year from snake bite are returned at 21 827 as compared with 23 167 in 1902 and the number of cattle destroyed by snake bites is pu + 0004 Rogers s simple and inexpensive instrument for t
and
of wild animals
the number of cattle destroyed 86 232 as compared with 83 999 in the preceding twelve months 48 deaths are supposed to have been caused by a single tigress infesting the Ambabhana jungle and one or two man eating wolves were credited with almost all the deaths attributed to these beasts in the Budaun Cawnpore, and Fatehpur districts

The plague epidemic is once more growing apace For the week ending Oct 29th the records show 15 494 deaths as against 13 871 in the preceding week The principal figures are Bombay district 9636 as against 8172 United Provinces 1446 as against 1276 and Central India 998, as against 1170

In Poona plague has been developing since July both in the city and cantonment During the monsoon months Poona has been very unhealthy large numbers of deaths having occurred from dysentery diarrhœa and enteric fever The drainage of Poona is in a terrible condition and the water supply from the open canal outside the city, though abundant is exposed to contamination As the city contains a population of about 100 000 it is high time that a scheme of sanitary improvement should be adopted

Nov 10th

Obituary.

GEORGE VIVIAN POORE, M.D. LOND., F.R.C.P. LOND.,

EMERITUS PROFESSOR OF MEDICINE, UNIVERSITY COLLEGE, AND CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

As already mentioned in our columns, the medical profession in London, and indeed that of the whole country, has sustained a great loss by the death of Dr. George Vivian Poore which occurred at Priory Lodge, Andover, Hampshire, on Nov. 23rd.

Dr. Poore was born in Andover in 1843, being the youngest of the ten children of Commander John Poore, R.N., who had retired from the service on the reduction of the navy in 1815. His father's influence and example might have given him a bias for a sea life and at the age of ten years he was sent to the Royal Naval School at New Cross, where he remained until he was nearly 17. At this school he gained the medal for good conduct and was offered a marine cadetship which was placed at the disposal of the head-master by the Lords of the Admiralty. This, however, he declined, having felt that his inclination was to follow the medical profession. He accordingly then went to Broughton, in his native county, to acquire some preliminary medical training under Dr. Luther Fox of that place, the father of Dr. Tilbury Fox, Dr. Edward Fox, and Dr. Thomas Fox. On leaving Dr. Fox he matriculated at the University of London and entered as a student at University College. In 1866 he took the qualification of M.R.C.S. Eng. and acted as surgeon to the *Great Eastern* while that vessel was laying an Atlantic cable in the same year. At University College he obtained distinction as the Atkinson-Morley surgical scholar in 1867 and the University scholar in medicine in 1868. In 1868 he also graduated at the University of London as M.B. and B.S., proceeding to the M.D. degree in 1871. In 1870 he was admitted a Member of the Royal College of Physicians of London and in 1877 he was elected a Fellow of the College.

In 1870 and 1871 he travelled as medical attendant with Prince Leopold, Duke of Albany, who died in 1884. At an early period in his career Dr. Poore made a commencement of the literary work which was to become so fruitful in after years, for in 1870 he contributed to our columns some Remarks on the Management of the Imperial Hospital at Vienna. He was at that time resident medical officer to University College Hospital where it was one of his duties to administer chloroform and to teach students the use of anæsthetics. While thus engaged he compiled a complete course of instruction on the administration of chloroform, which was published in THE LANCET in 1872 when he was holding the appointment of lecturer on medical jurisprudence at Charing Cross Hospital. The electrical treatment of disease was at that time practised only in a desultory and occasional manner but Dr. Poore perceived that the subject was capable of development and delivered courses of lectures on medical electricity at the hospital. In 1876, by which time he had become assistant physician to University College Hospital and senior physician to the Royal Hospital for Children and Women, Dr. Poore published his "Text-book of Electricity in Medicine and Surgery," a work which was in its day the most complete and useful treatise on the subject. In 1881, being then professor of medical jurisprudence in University College, he delivered the introductory address at the opening of the medical session, taking medical education and medical language as his topics. In his references to "medical language" he dealt mainly with the intricacies of anatomical nomenclature and counselled his hearers to aim as much as possible at simplicity of phrase. In the same year he published a useful manual on the "Physical Diagnosis of Diseases of the Throat, Mouth, and Nose," and delivered the Bradshaw Lecture of the Royal College of Physicians of London on Nervous Affections of the Hand. This lecture appeared in book form in 1897. After about 34 years of active industry as a physician, clinical teacher, author, and practical sanitarian Dr. Poore's health began to fail. For this reason he found it necessary in May, 1903, to resign his appointments as professor of clinical medicine in University College and physician to University College Hospital, and on the 29th of the following month, at the house of Dr. F. T. Roberts, Harley-street, W., he was presented with a piece of plate and a testimonial from his colleagues in the Faculty of Medicine and the medical committee in recognition of his valuable services. Such is the bare record of the professional life of a brilliant teacher and thinker. Outside purely medical work Dr. Poore was well known to the medical profession and the public alike as a practical sanitarian. Of his many contributions to our pages none were happier than those in which he dealt with the hygiene of the street, with the water-supply of country districts, and with the curious ignorance of sanitary affairs that mars the mental equipment of middle-class England. In his articles he was witty, scholarly, and very clear, qualities which he displayed to great advantage as a lecturer and public speaker, and in such books as "London Ancient and Modern from the Sanitary and Medical Point of View." This interesting book, which was published in 1889, exactly typifies the contributions which our readers received from Dr. Poore's pen. The economical and profitable disposal of excrement and slop water was a favourite subject with Dr. Poore and was fully discussed by him in two treatises of striking originality—namely, "Essays in Rural Hygiene," published in 1893, and "The Dwelling House," published in 1897. He considered the health conditions of town life to be eminently unsatisfactory and was a resolute opponent both of the water-carriage system of sewage disposal and of high buildings. In the garden of his house at Andover he raised luxuriant crops of fruit and vegetables by manuring with a mixture of fresh fæces and earth, at the same time proving that the subsoil water remained perfectly wholesome and capable of use as a domestic supply. He used his experiments in this garden to prove many of his theories with respect to urban and rural sanitation and all his friends were welcome to observe his practical demonstrations.

A medical friend and intimate acquaintance of Dr. Poore writes to us as follows: "To any old friend of his the name of Dr. Poore recalls that of Marcus Beck. One used to think of them and speak of them as 'Beck and Poore' as one speaks of David and Jonathan or Damon and Pythias. They lived together as students in the well-remembered Gothic Cottage, Regent's-park, enjoying to the full the pleasures, while making the best use of the opportunities, of that eventful time of life, and, with the short interruptions of hospital residence and of the time when Dr. Poore was in attendance on Prince Leopold, they lived together in Wimpole-street and at Isleworth until Beck's death in 1893. Their mutual affection and esteem were obvious to all and their inseparability became proverbial. The points of agreement in their characters were as striking as the differences. Both were possessed of unusual keenness of intellect, of sparkling wit and racy humour, of most amiable dispositions, and a wholesome hatred of anything savouring of a sham. The conversation of both was not only piquant and amusing but luminous and instructive. But whilst most of Beck's teaching was only given *vivâ voce* and thus has left no permanent record of him, Poore, being more practical, made notes of everything he did and at one time or another worked it into some of his published writings. Beck shone amongst his own intimates and students who adored him but he hated all the 'pomps and vanities'; Poore, while equally admired by his friends and students, was more a man of the world, moved more freely in wider circles and actually enjoyed a prominent position in a public function. Their house was where contemporaries and younger men were sure of obtaining sound advice after careful consideration of their doubts or difficulties. It was a place where some new light was certain to be shed upon scientific manners; and to some of your readers at all events the word 'post-Pathological' will bring back pleasant evenings there in those old days when the Pathological Society was the scene of more animated debates than are ever heard there now. After Beck's death Poore seemed to age and some of his light-hearted brilliance apparently deserted him. His after-dinner speeches and other public utterances were remarkable. He was rather short of stature and slightly built and he had the appearance of being, as was indeed the case, a somewhat delicate man. It was therefore almost startling to hear his loud and well-trained voice filling the largest room with ease. His delivery was deliberate but not too slow, his gesture suitable and easy; his English, without being pompous, never descended into the colloquial; his matter was always well arranged; he did not repeat himself, and when he had done he stopped. His points were often enforced by some quaint or humorous *illustration* and, in short, it may be said that he was an orator of no mean

GEORGE VIVIAN POORE, M.D. LOND., F.R.C.P. LOND.,
LATE PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

order He never spoke from notes, but he did not feel happy unless he had pretty full ones in his pocket The present writer was too nearly of his age to have listened to his teaching at the hospital It was always understood that he had a large following of students They said that his lectures on medical jurisprudence and on medicine were excellent and even unique It was often added, however, that their excellence consisted in the striking way in which the subject was presented and in their store of illustrative anecdote, but that they were not particularly adapted to prepare the student for the ordeal of the Conjoint Board Alas, that this should be the criterion by which lectures are to be judged It is a sad sign of the times The great lecturers of the past, like his old teacher Jenner, were those who taught from personal experience and whose lectures while reflecting their own individual thoughts, gave the hearers what no book can provide Of such teachers Poore was a worthy successor In the wards he was inclined to be dogmatic and his bedside teaching was couched in language almost as precise as that of his more studied speeches He was happiest when some case of nervous disease formed the subject of his discourse As a professor at University College and as a member of the staff of the hospital he rendered great services to each institution He never professed to admire the somewhat cumbrous machinery of the College and the delays resulting from the necessity of the constant reference of all matters from one committee to another before it reached the Council, and he did not hesitate to express his disapproval both in public and in private But he worked hard both as a member of the Senate and during the time he was dean of the Faculty of Medicine At the hospital he will long be remembered as the originator of a plan for rebuilding which, although the present structure differs in external appearance from that which he devised, supplied the essential principle upon which the final plans were worked out That principle is that each ward shall be completely separated by a 'cut off' from the rest of the building, so that they shall all be entirely separated from one another This made it possible to obtain the advantages of the pavilion system while erecting a building upon the limited site which was available The underlying idea springs naturally from the study of the subject of domestic sanitation, to which so large a part of his life was devoted The pursuit of this study and the dislike of the smoky atmosphere of London led him much into the country and may have made it appear to some that he looked at the country principally with the eye of a sanitarian But this is not quite the correct view He was no sportsman and no athlete but he had a real delight in the country for its own sake Sanitation may have heightened his pride in his Andover home and he certainly did not tire [illegible] monstrous apples or [illegible] the middle of his scie[illegible] last he delighted to t[illegible] with luscious fruit and fresh vegetables from this garden, upon which he could look from his sick room His illness was a lingering one and associated with many discomforts and inconveniences For months the only possible end was obvious not only to his friends but to himself, but all was borne with patience and at times even with cheerfulness No more appropriate place for the end of his life could be imagined than this peaceful spot in which he put to a practical test so many projects for the benefit of humanity '

ALFRED JOHN FREEMAN, M D ABERD, M R C S ENG

Dr Alfred John Freeman, who died on Nov 27th at San Remo after a very short illness, had for over 30 years held a foremost place among the English physicians practising on the Italian Riviera and had contributed in no small degree to the establishment of the reputation of San Remo as a health resort for British and American invalids It had been known for some time that he suffered from an atheromatous state of the vessels He was taken ill and fell down as he was on the point of visiting a patient about 5 P M on Nov 26th Soon afterwards he became unconscious and expired about 4 A M on the 27th. Dr Freeman was born in London in 1844 and received his medical education at St Thomas's Hospital and at the University of Aberdeen where he took the degrees of M B in 1866 and M D in 1870, having previously obtained the diploma of M R C S Eng in 1865 While he was studying in Aberdeen his health was far from good and he was advised to make his residence in a southern climate He accordingly spent a few months in France, acting for a time as medical attendant to Archbishop Tait, and then settled in San Remo where he continued to practise till the time of his death He was the author of "Medical and Climatic Notes on San Remo and the Italian Riviera, published in "Ball's Mediterranean Winter Resorts" In 1871 he married Miss E L Hopewell of Abington Abbey, Northamptonshire, who survives him The funeral took place on Nov 30th

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CHARLES WILLIAM CHALDECOTT, M R C S ENG, L S A

Mr Charles William Chaldecott of Dorking, Surrey, who died on Nov 5th, was born in 1828 and received his professional training at St Thomas's Hospital, where he studied from 1848 to 1851, gaining a number of honorary certificates and prizes, among which was the treasurer's silver medal for general proficiency In 1851 he became qualified as M R C S Eng and L S A but did not hold any of the resident appointments at the hospital which were open to him, as it was necessary for him to take over his father's practice at Dorking immediately From that date until his retirement in 1901 (exactly half a century) Mr Chaldecott was in the active pursuit of a very large practice He was twice married, his first wife, who died in 1866, being a sister of the late Sir John Simon, and he leaves a family of nine sons and daughters

Sir Dyce Duckworth writes concerning him "The late Mr Charles Chaldecott of Dorking was one of the best and most worthy country practitioners I have known I can add my testimony to his many excellent qualities from a friendship of some 34 years He was always careful, prudent and dependable, assiduous in his duties and concerned to afford the best assistance to his patients With the latter he commonly established firm and warm friendships Straight but simple, without any affectation or assumption of superior knowledge, he was a thoroughly trained experienced, and shrewd practitioner In his long career he had to encounter not a few sore trials but he bore them nobly as a high minded Christian gentleman He has left behind him a fine example in all the relations of life and he well upheld the position and dignity of our profession in his neighbourhood where he earned the respect and affection of all with whom he came in contact May he rest in peace '

DEATHS OF EMINENT FOREIGN MEDICAL MEN—The deaths of the following eminent foreign medical men are announced —Dr W Massen, professor of midwifery and gynaecology in the University of Odessa —Dr A Sanchez [illegible] or of clinical medicine in the University [illegible] K von Stellwag formerly professor of [illegible] in the University of Vienna —Dr Albert [illegible]mann formerly professor of dermatology in Vienna at the age of 78 years —Dr Alfred Zimmermann, a Vienna staff surgeon who was a very experienced operator especially in abdominal cases His death was due to septic poisoning He was only 39 years of age —Dr Redtenbacher one of the medical officers of the Vienna General Hospital —Dr Hugo Mittenzweig, one of the editors of the Berlin *Zeitschrift fur Medicinalbeamte* —Dr Robert Langerhans *privat docent* of pathological anatomy in the University of Berlin —Dr Joaquim Pereira da Cunha, professor of ophthalmology in the University of Rio de Janeiro

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VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8518 births and 6326 deaths were registered during the week ending Dec 3rd The annual rate of mortality in these towns which had been 15 7 16 6, and 17 3 per 1000 in the three preceding weeks further rose to 21 6 per 1000 last week In London the death rate was 21 7 per 1000, while it averaged 21 6 per 1000 in the 75 other large towns The lowest death rates in these towns were 5 8 in Horney, 11 3 in West Hartlepool, 11 7 in Kings Norton, 12 3 in Aston Manor, 12 7 in Walthamstow, 13 3 in Wolverhampton, 13 4 in Rotherham and 13 7 in Huddersfield, while the highest rates were 29 1 in Birkenhead, 30 0 in Gateshead,

30·1 in Stockport, 30·3 in Manchester, 30·7 in Wigan and in Middlesbrough, 30·9 in Smethwick, and 32·4 in Tynemouth. The 6326 deaths in these towns last week included 482 which were referred to the principal infectious diseases, against 380, 444, and 400 in the three preceding weeks; of these 482 deaths, 151 resulted from measles, 89 from diphtheria, 69 from whooping-cough, 63 from diarrhœa, 54 from "fever" (principally enteric), 53 from scarlet fever, and three from small-pox. No death from any of these diseases was registered last week in Willesden, Hornsey, Hastings, Brighton, Ipswich, Great Yarmouth, Kings Norton, Barrow-in-Furness, Huddersfield, or Rotherham; while the highest death-rates from the principal infectious diseases were recorded in Bristol, Hanley, Grimsby, Liverpool, St. Helens, Middlesbrough, Stockton-on Tees, and Gateshead. The greatest proportional mortality from measles occurred in Bristol, Grimsby, Liverpool, Bootle, Wigan, Middlesbrough, Stockton-on-Tees, and Gateshead; from scarlet fever in Plymouth, Warrington, and York; from diphtheria in Hull; from whooping-cough in Hanley and South Shields; from "fever" in Rhondda and Merthyr Tydfil; and from diarrhœa in Hanley. Of the three fatal cases of small-pox registered in these towns last week, one belonged to Halifax, one to Gateshead, and one to Newcastle-on-Tyne. Three cases of small-pox remained under treatment in the Metropolitan Asylums hospitals on Saturday, Dec. 3rd, and two new cases were admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 2625, against 2843, 2774, and 2741 at the end of the three preceding weeks; 247 new cases were admitted during the week, against 294, 259, and 262 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 324, 361, and 385 in the three preceding weeks, further rose last week to 565, and were 207 above the number in the corresponding period of last year. Influenza was certified as the primary cause of 26 deaths in London last week, against 24, 18, and 30 in the three preceding weeks. The causes of 81, or 1·3 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bradford, Leeds, Cardiff, and in 37 other smaller towns; the largest proportions of uncertified deaths were registered in Leyton, Hanley, Leicester, Liverpool, St. Helens, Rochdale, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·5, 17·3, and 18·0, per 1000 in the three preceding weeks, further rose to 21·2 per 1000 during the week ending Dec. 3rd, but was 0·4 per 1000 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 15·6 in Edinburgh and 16·5 in Greenock to 23·9 in Glasgow and 24·8 in Paisley. The 702 deaths in these towns last week included 34 which were referred to whooping-cough, 16 to measles, 10 to diarrhœa, six to diphtheria, four to "fever," and one to scarlet fever. In all, 71 deaths resulted from these principal infectious diseases last week, against 59, 47, and 60 in the three preceding weeks. These 71 deaths were equal to an annual rate of 2·1 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 19 and 21 in the two preceding weeks, further rose to 34 last week, and included 25 in Glasgow and seven in Edinburgh. The deaths from measles, which had been eight, five, and eight in the three preceding weeks, further rose last week to 16, of which 11 were registered in Aberdeen, three in Leith, and two in Glasgow. The fatal cases of diarrhœa, which had been 27, 19, and 18 in the three preceding weeks, further declined to 10 last week, and included three in Glasgow, two in Dundee, and two in Aberdeen. The deaths from diphtheria, which had been three, two, and nine in the three preceding weeks, decreased again last week to six, of which four occurred in Glasgow, where three of the four fatal cases of "fever" also were registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 136, 154, and 174 in the three preceding weeks, further rose last week to 190, and were 52 in excess of the number in the corresponding period of last year. The causes of 21, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·2, 24·2, and 22·6 per 1000 in the three preceding weeks, rose again to 27·0 per 1000 during the week ending Dec. 3rd. During the past four weeks the death-rate has averaged 23·5 per 1000, the rates during the same period being 17·7 in London and 16·7 in Edinburgh. The 196 deaths of persons belonging to Dublin registered during the week under notice were 28 in excess of the number in the preceding week and included 20 which were referred to the principal infectious diseases, against 12, 20, and 21 in the three preceding weeks; of these, 12 resulted from measles, three from whooping-cough, three from diarrhœa, one from diphtheria and from "fever," but not any from small-pox or scarlet fever. These 20 deaths were equal to an annual rate of 2·8 per 1000, the death-rates last week from the principal infectious diseases being 1·6 in London and 1·3 in Edinburgh. The fatal cases of measles, which had been seven, eight, and 12 in the three preceding weeks, were again 12 last week. The deaths from whooping-cough, which had been four in each of the two preceding weeks, declined to three last week. The fatal cases of diarrhœa, which had been five and four in the two preceding weeks, further fell last week to three. The 196 deaths in Dublin last week included 32 of children under one year of age and 54 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were slightly in excess of the respective numbers recorded in the preceding week. Five inquest cases and two deaths from violence were registered; and 70, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon C. Bradley to the *President* for three months' course of hospital study. Staff Surgeon F. Bradshaw to the *President* for three months' course of hospital study. Surgeons: R. Waterfield to the *Gibraltar*; W. G. Edwards to the *Juno*; R. R. Fasson to the *Cormorant*; J. O'Hea to the *Excellent*; and C. T. Baxter to the *Britannia*.

The undermentioned have been appointed Surgeons, viz.—Fernand Louis Joseph Marie de Verteuil, Lidbrooke Frank Cope, Horace Bryden Hill, Kenelm Digby Bell, James Richard Alexander Clark-Hall, Francis Hernaman-Johnson, Percy Montgomery Rivaz, Henry Mounsey Braithwaite, Duncan Gordon Addison-Scott, Arthur Sylvester Bradley, Lawrence Charles Hunt, Charles Robert Worthington, Patrick Duncan McIver Campbell, Ernest Davis Rutherford, Frederick George Wilson, Henry Cooper, James McAlister Holmes, Richard Willan, Alfred Oswald Hooper, Henry Strawson Turner, Maurice Willoughby Haydon, Samuel Henry Vickery, Robert Hunter McGiffin, Edward Michael William Hearn, and Alexander James MacDiarmid (dated Nov. 21st, 1904).

ROYAL ARMY MEDICAL CORPS.

Captain M. H. G. Fell, from the Seconded List, to be Captain (dated Oct. 21st, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. Robinson, 2nd Volunteer Battalion York and Lancaster Regiment to be Surgeon-Lieutenant (dated Dec. 7th, 1904).

ROYAL ARMY MEDICAL CORPS (MILITIA).

Frederick Edward Bissell to be Lieutenant (dated Dec. 3rd, 1904).

IMPERIAL YEOMANRY.

Lincolnshire: Major Thomas Horrocks Openshaw, C.M.G., from the London Companies Royal Army Medical Corps (Volunteers), to be Surgeon-Major (dated Dec. 3rd, 1904).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Forfarshire: Surgeon-Captain D. M. Greig to be Surgeon-Major (dated

[illegible] Lieutenant A. A. [illegible] dlesex (the Fins- [illegible] J. Adams, Senior Medical Officer, 5th London Volunteer Infantry Brigade, is granted the honorary rank of Surgeon-Colonel (dated Dec. 3rd, 1904). 1st London: Brigade-Surgeon-Lieutenant-Colonel W. R. Smith, Senior Medical Officer, 4th London Volunteer Infantry Brigade, is granted the honorary rank of Surgeon-Colonel (dated Dec. 3rd, 1904). 4th London. Surgeon-Lieutenant F. J. P. Daly resigns his commission (dated Dec. 3rd, 1904). 1st Volunteer Battalion the Durham Light Infantry: The undermentioned officers are granted the honorary rank of Surgeon-Colonel: Brigade-Surgeon-Lieutenant-Colonel J. W. Blandford (dated Dec. 3rd, 1904) and Surgeon-Lieutenant-Colonel G. Middlemiss (dated Dec 3rd, [illegible] and Light Infantry. [illegible] ns his commission [illegible] (The Customs and [illegible] F. W. Humphreys is granted the honorary rank of Surgeon-Colonel (dated Dec. 3rd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

The London Companies: The undermentioned Captains resign their commissions: C H. Gage-Brown (dated Dec 3rd, 1904) and H. Fulham-Turner (dated Dec 3rd, 1904) Argyll and Sutherland Bearer Company Brownlow Riddle to be Lieutenant (dated Dec. 3rd, 1904) South Yorkshire Bearer Company - Alexander French to be Lieutenant (dated Dec. 3rd, 1904).

THE NEW DRESSING PACKET FOR THE SPANISH ARMY

Adopting the principles that wounds caused by projectiles of small calibre may be regarded as practically aseptic and that all wounds when not infected are better treated aseptically than antiseptically, the Spanish military authorities have sanctioned the issue of a sterilised dressing packet which includes no antiseptic substance The contents of the packet are as follows (1) An external impermeable envelope 12 centimetres by eight, having rounded corners; three of the sides are stitched, the stitches being covered with a double layer of waterproof varnish, and on the outside the instructions for use are plainly printed; (2) an inner envelope made of paper-parchment, (3) two safety pins six centimetres long, wrapped in paper; (4) two compresses ten centimetres by seven, made of anhydrous cotton, weighing each eight grammes, and placed between two layers of gauze, and (5) a cotton bandage.

THE USE OF MOTOR VEHICLES IN WAR.

A War Office committee has been appointed to inquire into, and to report upon, this subject. Sir William Taylor, the Director-General of the Army Medical Service, recently witnessed trials of a new application of the Ivel motor adapted for the use of the medical service in the field It is thought that an armoured motor system might render good service in the field if made applicable to ambulance purposes.

THE JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The December issue of this journal strikes us as a good one. It contains quite a large number of papers on a variety of subjects not only specially connected with service matters but with subjects of clinical and scientific interest, together with some good reports of cases.

THE WAR IN THE FAR EAST.

The interest in the little news there is from the seat of war [illegible] frequent encounters but these are not on such a scale as to give them any great importance Just at the present time, and with the Baltic fleet on its way, everything turns on the [illegible] time during which that [illegible] e has lasted about six [illegible] expected by the Japanese [illegible] plans. Be this as it may, the fighting at Port Arthur has given rise to an enormous number of casualties, especially on the side of the besieging force, and has also rendered the Japanese generals in Manchuria unexpectedly slow in carrying out their movements. Meanwhile we learn that energetic preparations, both military and naval, are being made in Japan in view of the approach of the Baltic fleet From a purely medical point of view there is but little to be said. A large number of sick are still in the Russian hospitals in and around Mukden, where the difficulties of communication and administration [illegible] rganisation and to [illegible] committee of the [illegible] th in St Petersburg on Nov. 28th Mr. R C. Morkotoon raised the question of watching the cases of consumption amongst the land and sea forces in the present war, "which," he said, "is being fought under very trying conditions and will doubtless be distinguished by an increase in the number of cases of tuberculosis in the army Many soldiers and sailors return from the front with a lowered vitality and easily become susceptible to the disease Further, as these men will be distributed all over Russia they will tend to plant the disease [illegible] "herefore their cases call [illegible] in connexion with the [illegible] dergoing treatment." In the discussion which followed the *Novosti* reports that the need for clearer instructions to the medical men was insisted upon, there being only one article in the military law to guide them and that article is very indefinite. The medical man has now only a consultative voice. He does not decide on the acceptance or rejection of a recruit.

Much inconvenience is being experienced in the hospitals at Kharbin, says the *Novoe Vremya*, owing to the insufficient supply of milk

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 9, 1826.

[illegible] r we have just seen, [illegible] and government to [illegible]

At the era of its establishment, the science which it professed to teach was in as low a condition in these countries, as the ideas of men were unenlightened on the subject of medical education. Under such circumstances any alteration might well have passed for an improvement In the field of tuition it had no rival to dispute the prize of superiority, and victory consequently became an easy attainment The Colleges of Oxford, [illegible] already borne down by the [illegible] opolitan locality gave it a [illegible] sisters in Scotland The stimulants of poverty, that "mother of excellence," as it has been called by the Roman Satirist, exercised in its case a salutary influence There [illegible] professor against a neglect [illegible] acres to support him in le[illegible] daily reduced the farce of [illegible] drama of real life The state [illegible] pupils to go abroad, it would require but moderate abilities in teachers, and partial opportunities of learning, to stop this tide of studious emigration Of this the founders of the school seemed perfectly aware, and took care to transfer into the new concern some of the methods of teaching practised in the foreign seminaries, such [illegible] the system of clinical instruction, for overlong the [illegible] ast of the Royal Infirmary. A succession of men [illegible] ment in their respective pursuits, but whose equals [illegible] ight be found in every count[illegible] e patrons of this school in [illegible] ly attended to, conferred a [illegible] its infancy. Left in some measure without a choice, reduced by fame, and pretty certain of a diploma, students naturally crowded to its halls, and dispersing again into the walks of life, communicated a fresh impulse to the growth of its "laurels" Every succeeding graduation day gave it so many new partisans as it bestowed diplomas, the young doctor having a personal interest involved in its praise, while the old "Sangrado," shaking

powder and parables from his wig, gave the irresistible sanction of his experience to the eulogium of his juvenile friend. To inflate the bubble of its reputation, the press was called into action.—Theses, essays, pamphlets, every thing in the shape of a book, from a single sheet to a five hundred-page quarto, proclaimed Edinburgh the seat of the medical sciences. If original works could not be composed, foreign ones of merit immortalized translators, while others crawled into notice in an "improved edition," or made their way into notoriety in a heap of "commentaries," as useless as the obscure lumber which they were intended to illuminate. Success only generated a further spirit of enterprise; and to increase the number of pupils rather than to provide them with the materials of solid instruction, would seem to have been the object contemplated in every regulation formed by the conductors of the school. Through the interference of fathers and friends with the Senate and Patrons, catchpenny professorships successively arose out of the mangled body of the science in ghastly pomp, and their certificates made a part of the gaudy *curriculum* of education. Vapid prelections on the theory were substituted for the actual practice of physic, and demonstrations on an occasional putrid subject supplied the place of manual anatomy. But behind this gorgeous trellis of books, lectures, professors, and other didactic paraphernalia, there was nothing substantive, practical, or valuable; the whole was a mere pageant passing before the eyes of men, but so artfully conducted that it was mistaken for a reality—for at no period did Edinburgh ever present employment for more than sixty or eighty pupils. Where was such employment to be found—that employment which, exercising the body and the mind, improves the faculties of both, not that visionary application to hear-say knowledge which scarcely leaves an impression behind? Not, surely, in the crowded wards of one hospital, or in the dissecting-rooms whose atmosphere was seldom vitiated by the odour of anatomy. To accommodate the superficial qualifications of the victims of this system of delusion, the difficulty of examination was reduced to a minimum, and to give the process a semblance of learning and severity, it was conducted in a dead language, in which not one in five hundred, though he were well informed, could give any indication of his knowledge. Anglo-Latin theses elaborated out of Ainsworth, or purchased ready-made for a guinea, were put forward with the same obliquity of purpose, as tests of a graduate's classical and professional attainments. The scheme was so judiciously arranged, and the "summi honores" so liberally divided in the wheel, that to purchase a ticket was to insure a prize. In short, the mercenary principles of political economy were as rigidly acted on in the management of the school, as in the working of a steam factory, and to produce the greatest quantity, without any reference to the quality, in the shortest space of time, and with the least expenditure of labour, became the main spring of action. The forcing system thus established, necessarily produced in the medical the same effects as in the mercantile world, a supply exceeding the demand, until every village in the empire could exhibit a brace of Edinburgh M.D.'s reposing under one blanket, or doling out death and physic to the community from behind one counter.[2]

[1] Edinburgh University.
[2] Excerpt from letter from "Scotus" to THE LANCET, headed "Sketches of the Medical Schools of Scotland. No. II."

Correspondence.

"Audi alteram partem."

MEDICAL MEN AND THE SUBPŒNA AD TESTIFICANDUM.

To the Editors of THE LANCET.

SIRS,—It is important that medical men should know what course to pursue when served with a subpœna to attend and give evidence in a court of law, but it is not always possible to act as you suggest. It might not, indeed, be prudent, since the solicitor might be acting for a blackmailer or might have a speculative interest in the issue. In the case on which you commented in your leading article of Dec. 3rd I was unable to communicate with the person responsible for the subpœna, since no address was given, and I was strongly disposed to pay no attention whatever to the summons, but I took the precaution of communicating with the solicitors of the London and Counties Medical Protection Society, Messrs. Le Brasseur and Oakley, and was advised that it would be unwise to do so. A statement of the circumstances was laid before the judge through the solicitors, and an arrangement was made, through his lordship's kindness, by which the annoyance and loss of time were minimised. The case was called at the opening of the court and before it was entered upon at all the judge asked the plaintiff what evidence she wanted from me, with the result that I was allowed to leave in a few minutes without even being sworn. I may, perhaps, take this opportunity of expressing my appreciation of the courtesy and consideration shown by the secretary and solicitors of the Medical Protection Society, to whom I have had recourse on more than one occasion when my name has attracted the attention of owners of secret remedies. I am, Sirs, yours faithfully,

Dec. 6th, 1904. W. H. BROADBENT.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—My attention has been called to the appearance in several lay papers of some observations of mine on "temper powders" as if they had been written for the lay press. As a matter of fact, these are quotations from a paper on the Use of Salicylate of Sodium and Bromide of Potassium in the Irritable Temper of Cardiac Disease and Gout. This paper appeared in the *Practitioner* for July, 1896, and parts of it having been quoted without acknowledgment of its source by one paper they were reprinted by others. Hence my remarks, intended solely for medical readers, have been supposed to be written for the general public. I regret this very deeply, for I think that had I done this, as many believe that I have, I should have been guilty of conduct derogatory to the profession to which I belong and naturally I am much grieved that I should be supposed to be guilty of this. I regret also that the quotations may do actual harm to health because the drugs mentioned, though perfectly safe in the hands of the medical practitioners for whom the paper was written, may prove mischievous in the hands of persons ignorant of their properties.

I am, Sirs, yours faithfully,
LAUDER BRUNTON.

Stratford-place, Cavendish-square, Dec. 5th, 1904.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—In as few words as possible I would put before your readers the claims of the Epsom College Royal Medical Foundation to their support. It gives pensions of £30 per annum to 50 aged medical men or their widows, and boards, clothes, and educates 50 sons of necessitous medical men free of charge. The council has to collect year by year contributions to a sum of about £6000 to fulfil these duties which they have taken upon themselves. No one can doubt that the medical profession is exposed to more risks than other professions, and in the case of those living in the tropics and at many other stations abroad these risks are increased.

Do we reach all classes of the profession when in need? We claim that we do, for at present we have pensioners residing in Africa, Australia, and France. The sons of medical men, as foundationers, receive a first-class education free of cost and it is worthy of note that many of these lads rise to the highest positions in college and after leaving Epsom attain to high rank in political, medical, or commercial life. To maintain this great charity is a tremendous strain and we need more support. A simple way out of our present difficulty would be to reduce the number of pensioners and foundation scholars but the council are loth to adopt this course in view of the large number of candidates awaiting election. With the loyal assistance of friends they have managed to maintain 50 of each class for many years past and they are most anxious to continue to do this.

If we perform the duties I have referred to I would venture to suggest we deserve to be *assisted*. The main details of our life for more than 50 years will be found in the prospectus which the secretary will gladly forward to

applicants I am arranging that almost every governor abroad and in the colonies shall receive his voting paper in time to return it for the annual election The scheme of education is on the lines of a first class public school we receive our boys from all classes and prepare them for every department in life The record of school successes will, I think, show that parents can send their sons to us with every confidence that they will receive a first class education at a most reasonable charge and that they will mix with a good gentlemanly lot of companions Epsom College is peculiarly well fitted to receive the sons of medical officers in the naval, military, and civil services

I would ask the pecuniary aid of your readers for the charitable part of our work and their confidence in our school The great schools of England have their foundations in realised property, we are at present dependent on the support of
year by yea
might we n
their indebt
task of obta
of tendering my warmest thanks

I am, Sirs, yours faithfully,
C HOLMAN, Treasurer

37, Soho square London W C, Dec 5th 1904

THE ANNUAL MEETING OF THE FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET

SIRS,—As one who has attended all these meetings from their commencement, and has had much to do with the organisation of the Members' Society, I thank you for the sympathetic article in THE LANCET of Dec 3rd There is no doubt that the situation is very much as you describe it We belong to a practical profession, and it is no matter for surprise that the bulk of the Members refuse to attend meetings at which their votes count for nothing and which lead to no result whatever How much longer we shall consider it our duty to attend these meetings I cannot say, personally I think not long They will then have to cease for want of a quorum, as those of the Fellows have done With the meetings will also cease all interest on the part of the Members in the College, which will be regarded by all, as it now is by many, as an institution with which it is desirable to have as little to do as

the College a popular institution and of maintaining an interest in its proceedings among all its Members For 20 years it has refused to take a single step in this direction beyond circulating its report among those who apply for it The fact that between 3000 and 4000 Members have so applied shows that there is still a large amount of interest in the College existing, in spite of the repellent and even hostile attitude of the Council If nothing can be done under the present President, who is an expert on the whole question, nothing can be done at all The matter rests with the Council At the slightest indication of a more conciliatory attitude on their part the theatre would be filled, as in the old days, from floor to ceiling Otherwise the College will be left, so far as the Members are concerned (in Bismarck's elegant phrase) 'to stew in its own juice

I am, Sirs, yours faithfully,
W G DICKINSON

Dec 5th 1904

CANCER OF THE CERVIX COMPLICATING LABOUR

To the Editors of THE LANCET

SIRS—Dr Amand Routh in his letter in THE LANCET of Dec 3rd, p 1612, has not given facts justifying his opinion that the conservative operation is "the correct one" or refuting my statement tha
of the serré nœud is safer
cases of advanced cancer
however, two serious misstatements which I would ask your permission to correct He says of me "He does not bring forward any case of his own in support of his view" This statement is contrary to fact Not only did I at the Obstetrical Society read an account of a case successfully treated by this method but a printed abstract and table containing its essential features were in the hands of the Fellows attending the meeting, of whom Dr Armand Routh was one Again, Dr Armand Routh says "Sarwey, however, does actually compare the two operations in question" This statement also is inaccurate Sarwey compares the conservative operation with Porro's operation without discriminating between cases treated by the extraperitoneal method and those treated by the intraperitoneal method which I showed in my paper to be very dangerous in skilful hands Even had Sarwey done what Dr Amand Routh erroneously says he did, his figures would not have had the value of the more recent and larger figures contained in the great statistical work, 'L Operazione Cesarea Porro, which aims at giving all the accessible cases of "Porro's operation" performed in all countries from 1876 to 1901, and which Dr Armand Routh disingenuously calls "foreign statistics" To repeat, the fullest and most recent statistics which I have been able to find show the mortality of the conservative operation to be about 60 per cent and that of the Porro operation
per cent,
six tenths

I am, Sirs yours faithfully,
HERBERT R SPENCER, M D Lond

Harley street Dec 5th 1904

THE ACTION OF PERCHLORIDE OF IRON IN BLOOD POISONING AND OTHER DISORDERS

To the Editors of THE LANCET

SIRS,—I am pleased to see the letter of Dr P W Latham in THE LANCET of last week and hope that this discussion may lead someone to try chlor albumins as a substitute for more irritant preparations He asks if chlorine is given off as such from these compounds This question would be better answered by my friend Dr Hopkins, but I presume that hydrochloric acid, at any rate, is not formed because a solution of chlor albumin in very dilute alkali slowly loses chlorine yet no precipitation of the chlor albumin occurs such as takes place on the addition of an acid Dr Latham appears to think that because Carius's method was used to estimate chlorine in these bodies therefore they are extraordinarily resistant to dissociation This is by no means the case On the contrary, their alkaline solutions lose chlorine, as above mentioned on merely standing in the cold, while the dry substance is partly decomposed on heating to 100° C My point however, is that there is evidence that the organism in fever has need of chlorine and ordinarily must obtain it from such a stable salt as sodium chloride Now what more suitable substance could be imagined for supplying chlorine to the blood or tissues than a direct compound of chlorine with blood serum in a very weak alkaline solution which slowly yields up its chlorine? In conclusion since Dr Latham raises the question of the value of sodium chloride as a therapeutic agent I may mention that it has been recommended for the treatment of fever by no less authorities than Graves of Dublin[1] and William Stokes,[2] more recently by Torald Sollmann[3] and von Moraczewski,[4] not to mention your very humble servant

I am, Sirs, yours faithfully,
G C GARRATT

Dec 6th 1904

SMOKE AND FOG

To the Editors of THE LANCET

SIRS—The somewhat disheartening annotation in THE LANCET of Nov 26th p 1515, which includes such statements as 'the fog last week was as bad, as persistent, as dense and as irritating as ever, needs some answer from those who, like myself, are optimistic as to the result of the smoke abatement movement on the London fog It has never been contended that London can be more free from fog than other parts of the country in England when meteorological conditions are such as to produce fog The contention has been that London suffers much more from fog than surrounding parts and particularly the neighbouring parts of

1 Dublin Journal of Medical Science vol vii, p 136, 1836.
2 Ibid
3 American Journal of Physiology, vol viii p 155, 1902.
4 Zeitschrift fur Klinische Medicin vol xxxix. p. 44, 1900.

the Thames valley and that the extreme prevalence here is due to the charging of the atmosphere with the products of incomplete combustion of coal. The statistics of the Meteorological Office prove that we lose in winter 50 per cent. of the sunshine which districts adjoining London enjoy and also prove that on days when there is no fog in London the atmosphere is so charged with particles as to become opaque in a short distance; for instance, it has been proved that during December and January (on days when there is no fog) the top of St. Paul's Cathedral is not visible from the top of Westminster Abbey, a distance only of one and one-third miles. The fogs which we have experienced lately in London were prevalent also down the central parts of England and it was not likely that we should escape them, but in spite of your statement that they were "as bad and as dense" as ever I cannot bring myself to believe it, for, bad and irritating as they were, it has been a matter of common observation by all those with whom I have discussed them that they were the least black of all the fogs we have ever experienced. There was not one day (at any rate, in the West End) in which they were either thick yellow, or brown, or black, and although all the conditions were present for producing the "London particular" it was conspicuous that the "pea-soup" condition was absent. Your columns have always been so friendly to any efforts made in the direction of diminishing smoke that I venture to hope that your article will not have the effect of destroying your readers' hopes of future improvement.

The efforts of the Coal Smoke Abatement Society are now being continued with renewed energy and the society trusts that those authorities, one of which is referred to in THE LANCET of Dec. 3rd, who have not yet come into line with other more advanced bodies will do so ere long. When smoke from factory chimneys has ceased the domestic problem will have to be tackled and when it is considered that there are 600,000 kitchen chimneys in London, all of which might be made smokeless, it will be seen that the problem is not so insoluble as some think. Cook has no objection to smokeless cookery, it saves dirt and consequent trouble to her, and she is but human!

I am, Sirs, yours faithfully,

H. A. DES VŒUX,

Honorary Treasurer, Coal Smoke Abatement Society.

Buckingham-gate, S.W., Dec. 6th, 1904.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In your otherwise accurate report of what I said n the debate on school certificates furnished by laymen (THE LANCET, report of the proceedings of the General Medical Council, Dec. 3rd, p 1596) the final sentence, "He hoped ..... advice," has crept in by some accident. It would have been irrelevant to the question and would not agree with what I have elsewhere said in Council on the subject.

I am, Sirs, yours faithfully,

Dec. 3rd, 1904. P. H PYE-SMITH.

THE RESULTS OF COLECTOMY IN CARCINOMA OF THE COLON.

To the Editors of THE LANCET.

SIRS,—In Mr. A. W. Mayo Robson's interesting Bradshaw lecture reported in THE LANCET of Dec. 3rd, p. 1553, the results obtained by me in the treatment of carcinoma of the colon by colectomy are referred to in detail. It is stated quite correctly that I reported[1] seven colectomies for carcinoma without a death, but the other details given by Mr. Robson are curiously inaccurate. Not only are the intervals of time between operation and report wrongly given but recurrences of the disease unbeknown to myself are mentioned. By way of correction I give you the following extract from my paper[2]: "With the exception of the first patient on the list, who lived in complete comfort for four years and then died suddenly from heart disease, all the patients are alive and in good health at the present time and they have all put on flesh. All the patients have been examined recently and no evidences of recurrence can be detected either from the presence of symptoms or by physical examination of the abdomen. In three cases sufficient time has elapsed to give good grounds for hoping that the cure in them will be permanent. One case was operated upon over four years ago, another two and a half years ago, and the third two years and two months ago. The remaining three cases were operated upon too recently—nine, six, and two months ago—to warrant any prediction regarding ultimate prognosis."

Twelve months have elapsed since the paragraph just quoted was written and the six patients are still alive and well and free from any known recurrence. During these 12 months I have done two more colectomies for carcinoma of the colon. Both patients made normal recoveries and are now alive and well without recurrence.

I am, Sirs, yours faithfully,

Harley-street, W., Dec. 3rd, 1904. BILTON POLLARD.

[1] Brit. Med. Jour., Jan. 23rd, 1904, p. 175.
[2] Ibid., p. 181.

THE USE OF ALCOHOL IN THE TREATMENT OF ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—A great change has occurred in recent years in our estimate of the value of alcohol in the treatment of the acute zymotics. In scarlet fever and small-pox, I believe alcohol is now comparatively little used. Even in diphtheria where the tendency to cardiac failure was supposed to be an indication for its routine use, it is much less used than formerly, and high authorities have confessed that they have largely lost faith in it. In no zymotic disease however, did the position of alcohol appear to be more firmly established than in the case of enteric fever and in none perhaps was it more largely prescribed. But even in this disease expert opinion appears to be changing. Dr. F. Foord Caiger, medical superintendent of the South-Western Fever Hospital, in his very able Bradshaw Lecture on the Treatment of Enteric Fever,[1] says:—"I rank myself with those who hold that in most cases of enteric fever not only is alcohol not required, but that its employment is occasionally distinctly harmful even when given in quantities which would not be considered excessive." Dr. Caiger does not contend that in every case of enteric fever alcohol is useless, but I think it is evident he holds, as many of us do, that the value of alcohol in the treatment of this disease has been very much over-estimated and that it certainly ought not to be regarded as a "sheet anchor," to be freely prescribed as a routine measure in almost all severe cases of the disease.

In order to satisfy oneself of the special value of a new drug in the treatment of a disease it is desirable to treat a continuous series of cases with the drug. Similarly, in order properly to appreciate the supposed, but doubtful, value of an old drug it is desirable to treat a continuous series of cases entirely without it. I may therefore mention that in the isolation hospital of this town the practice of prescribing alcohol in enteric fever (or in any zymotic disease) has been entirely discontinued for the last three years, during which period over 100 cases have been treated. The numbers are, of course, too small for any argument to be based upon the case-mortality (which, however, has been below the figures that Dr. Caiger gives as the average for this disease), but speaking from our own experience we have seen no reason to return to the old practice. The history of medicine, unfortunately, abounds with instances in which individual drugs or therapeutic measures have acquired altogether false or at least greatly exaggerated reputations. In the true interests of the healing art it is obviously much to be desired that whenever this is the case we should learn to appreciate such drugs or measures at their true value. But in the case of alcohol there is an additional and all-important consideration which should make every medical man loth to prescribe it if he can possibly avoid doing so. I refer, of course, to the alcohol habit with all its attendant misery and degradation and to the undoubted encouragement which the medical prescription of alcohol gives to the self-prescription of it.

There are not many therapeutic indications to meet which the Pharmacopœia provides only a single remedy, and for any given purpose for which alcohol is usually prescribed—be it as stimulant, tonic, antipyretic or hypnotic—a little thought will generally enable some other and less objectionable drug to be substituted with equal if not better results.

I am, Sirs, yours faithfully,

C. KILLICK MILLARD,

Leicester, Nov. 28th, 1904. Medical Officer of Health.

[1] THE LANCET, Nov. 26th, 1904, p. 1475.

THE TRAINING AND SUPPLY OF MIDWIVES

To the Editors of THE LANCET

SIRS,—Will you allow me to supplement your kind notice of the meeting held on Nov 4th by the Association for *Promoting the Training and Supply of Midwives* at which the chair was taken by the President, the Archbishop of Canterbury, by saying that the office of the Association is at Dacre House New Pothill street Westminster, and that the secretary, Miss Gill, is there daily for interviews from 10 30 to one o clock, Saturdays excepted? She will gladly give any information concerning the various branches of our work and the best means of meeting the requirements of the Midwives Act, and we specially want it to be known that we are ready to send speakers to any part of the country to address meetings on the subject

May I quote, in conclusion the eloquent words of Mrs Humphry Ward in her speech at the meeting is an appeal for the money we need to assist in the training of midwives to supply the dearth that will become more and more evident as those who are incompetent retire from practice under the searchlight of the new regulations 'How many there are still, who, *professing to know but knowing nothing may at any* time bring danger and death upon mother and child How can we *bear* to think of a mother being injured in the hour of her trouble—that hour when all the community should be her guardians—when being unable to help her elf she is ready to trust herself to hands unfit or inexperienced Every woman of means who rejoices in her own children can help if she will She can support this Association, she can give her yearly subscription, she can provide training for one woman, or more if her means are large She can help women and children who are fighting the battle of life with hands no stronger than her own and with resources so pitifully less

Subscriptions and donations will be very gratefully received at the office or by the honorary treasurer Mr Arthur L Leon, L C C, 20, St Thomas s Mansions Westminster Bridge or by myself (Mrs Wallace Bruce 9 Airlie gardens Campden hill, W)—I am, Sirs, yours faithfully

AGNES MABEL BRUCE
Nov 28th 1904 Chairman of the Executive Committee

THE WORLD'S FAIR AT ST LOUIS

(FROM OUR SPECIAL SANITARY COMMISSIONER)

(*Continued from p 1679*)

St Louis Nov 15th

IN the section devoted to the liberal arts the corporations of Liverpool, Manchester, Birmingham, Glasgow and other towns show what they are doing in respect to drainage the treatment of sewage and the housing of the poor The Indian Public Works Department also has many plans of wells and irrigation works which have for their main purpose the forwarding of agricultural interests but like wise tend to improve the health of those who live in the better drained districts At the other end of the building the exhibits of the German Empire occupy extensive space and there are given most elaborate descriptive illustrations of what has been done A great number of towns show on the walls maps of their sewers and sectional drawings and give other details The whole plans with many details of application are given of the waterworks notably of Cologne, *Dresden*, Hanover and Munich Then there is the wonderful sanitary map of the German Empire which was exhibited in Paris in 1900 By the side of every town figures give the birth and death rate and the amount of litres of water supplied per head of the population, while special signs indicate the nature of the water supply and the system of the drainage Then there is a large case which contains drawings and photographs of the German sanatoriums for the treatment of tuberculosis These are issued by the Board of Health of the German Empire Most of the buildings are of the pavilion one storey type but some have three and even four storeys Broad verandahs and balconies abound, with room for the patients to lie in their beds while under shelter in the open air The tops of the pine trees are seen above the roofs of these buildings and suggest a balsamic and perfumed atmosphere Less odoriferous in their character are the sewer farms that abound in Germany, especially on the outskirts of Berlin These are shown not merely by plans but by large models with little toy trees The hydropathic resorts exhibit on a large scale, especially Bad Nauheim We are shown also how patients, when gargling are separated from each other by glass partitions and have enamelled basins breast high in front of them so as to avoid accidental infection due to splashing But undoubtedly one of the most instructive and practical of the German exhibits, and one which occupies in the Education Section a large department all to itself, is that relating to the insurance of workmen The Government has taken care that this should be as complete as possible There is even a separate catalogue issued for this exhibit and a veteran German soldier is there all the time to give explanation and technical pamphlets of which there are a large number translated into English and published especially for the St Louis exhibition Here are the statistics in regard to sickness accidents invalidism or old age of the entire working population of Germany What help the system of compulsory insurance gave in each case can be seen as well as how this most gigantic machinery or organisation has prevented pauperism and has helped to reduce the death rate There is probably nothing shown in the whole World s Fair that has had a greater and more practical effect

The building devoted to Education and Social Economy also contains much that relates to the questions bearing on public health One end of this structure is occupied by the extensive exhibits of the United States Department of Agriculture It was by an Act of Congress dated July 2nd, 1862 that colleges of agriculture and mechanic arts were established These institutions have received from the nation 11 322 000 acres for educational farming, in money $31 157 588 had been given and more than 50 000 students have been enrolled One large section of the exhibits of these schools is called the Dairy Laboratory and here much practical information can be obtained on the question of the preservation and sterilisation of milk Thus for instance it has been demonstrated that to kill the germs of tuberculosis it is not necessary to sterilise milk at a higher temperature than 140° F This, it is claimed is of the greatest importance, for if the temperature is raised to 150° the galactase is lost and the milk becomes indigestible Also it is not possible to make cheese with milk that has been heated up to 150° But if the temperature has not exceeded 140° the cream will rise in the normal way *It is the agricultural* school at Madison in Wisconsin that has made the most extensive experiments and researches on this subject Its twentieth annual report gives details about the experiments To sterilise the milk a rotary machine is necessary otherwise the portion of the milk nearest to the [illegible] would be overheated and that furthest from [illegible] ary more [illegible] the milk [illegible] that from 98 9 to 99 8 per cent of the bacteria were destroyed At St Louis where sanitary conditions are far from perfect, there are about 3000 cows and the milk which they give is purer and better than the milk imported into the town from the healthier surrounding districts This is simply due to the greater severity of the sanitary inspection organised within the *confines* of the town Here as in England, the problem presents itself as to how a town can control a milk supply which for the most part is derived from districts far away from its jurisdiction *In these circumstances the suggestion* is made that a regulation might be enforced to the effect that all milk imported from districts not controlled by the town inspectors must be pasteurised before it can be sold It would then have the advantage of being not only safer but it could be kept for a much longer time Apart from the question of sterilisation one of the greatest necessities is to keep milk cool At New York city the inspectors have the right to destroy all milk offered for sale at a temperature above 50° F But the San Francisco authorities have hit on the best device They simply put on a board the names of the dealers discovered selling milk of an inferior quality These announcements are copied by the local newspapers and this terror of exposure has been found to be more effective than any number of laws and legal penalties

Next to the Dairy Laboratory there is a model respiration

calorimeter for experiments with steers and other cattle. The object is to determine the income and outgoing of energy and matter from the body. Two cylinders of measured capacity form a pump and as they rise and fall they draw out the air in measured quantities from the carefully closed room or stable containing the animal. This pump works automatically. The air from each hundredth stroke of the measuring pump is delivered alternately in one of two pans. From the pans it is drawn through U tubes and also through a combustion furnace by an auxiliary air pump. In the U-shaped tubes the carbon dioxide and water of the air are absorbed and weighed. There is also a heated tube containing platinised kaolin which oxidises the combustible gases given off by the animal to carbon dioxide and water which are absorbed and weighed in the U tubes. The air admitted into the respiration chamber is likewise analysed. Elaborate methods of observation are devised so that what is occurring inside may be noted from the outside of the respiration chamber. The bullock, or whatever sort of animal it may be, is so dressed in waterproof bags that none of its dejections are lost nor can they fall on the floor. The animal itself is strapped up so that it cannot lie down. It must simply stand, eat, and breathe. The results show the total energy of food, the amount lost in various excreta, the energy due to oxidation of the tissues of the body, and the amount stored as increase of tissue. Remembering the debate in the Industrial Section of the Brussels International Congress of Hygiene on over-work, how over-work could be defined physiologically, and what its chemical effects were, I could not but wonder when elaborate experiments similar to the above would be made with that class of labourers who toil much in the same way as the beasts of burden. However this is one of the best corners of the World's Fair. It illustrates science applied to agriculture in all its branches and shows what is best in modern mechanical and scientific applications. There is no trickery here but an earnest effort to improve the world's food-supply. The section comprises, with agriculture, exhibits illustrative of civil engineering, much chemistry, and some bacteriology.

In this building a great number of universities have exhibits. The University of New York has a curiosity. This is an autotype copy of the portrait of Miss Dorothy Catherine Draper taken by her brother, J. W. Draper, M.D., LL.D., professor at this University. The portrait is now in the possession of Sir William James Herschel of England. It bears the date of 1840 and is stated to be the earliest photograph of a human face that exists in the world. There is also here the first public telegram which is dated Jan. 24th, 1838. 33 States of the United States and 14 nations have exhibits in this building. Eight of these American States send the exhibits from their boards of health. For instance, the State of Massachusetts illustrates the methods adopted for detecting colouring matter added to preserved articles of diet. There are many photographs in regard to sewage farms, drainage, and water-supply. New York has a fine compartment to itself which contains photographs of the city taken from the roof of the famous "skyscraper" building known as the "flat-iron," and intended to prove that the smoke nuisance has been considerably decreased. Then there are photographs of both clean and dirty cowsheds and of fever hospitals, and charts showing that in New York the annual deaths from diarrhœal disease have during the period from 1881 to 1903 decreased from 3·6 to 1·4 per 1000 of the population. Other charts indicate the great reduction in deaths from diphtheria since the use of antitoxic serum. The imposition of "quarantine" for measles has also given good results. This dates back to 1896. But the number of cases reported has not decreased—indeed, the highest figure was reached in April of this year; it is only the number of deaths due to measles that has been favourably affected.

Close to the New York section is a compartment reserved exclusively for a model of the Cameron septic tank, with which we are familiar as applied at Exeter and other places in England, for the purification of sewage by the self-destructive action of the bacteria which it contains. Here there are exhibited pictures and so on of the application of this system in various parts of America, where it was first installed at Glencoe, Illinois. Close by there are exhibits from different localities relating to the outdoor treatment of tuberculosis and it must be confessed that some of the very small wooden huts deeply imbedded in the snow are not inviting. They cannot be properly ventilated and are likely to be too hot or too cold. The tent dwellings shown seemed to be preferable, especially those provided with double canvas roofs. Cuba and Japan have health exhibits here which stand side by side. The former naturally has much to demonstrate in regard to mosquitoes and the wire-netting and framework used for protection and observation. In this same building Mr. Charles Booth's celebrated social map of London is exhibited with many statistics and also a public-house and church map. The English universities have not any very large exhibits and but little that relates to public health questions. But the Germans are here again very prominent and are really marvellously systematic in their scientific exhibits. This is notably the case with their extensive display of scientific instruments. The prefecture of police and the administration for the relief of the poor in France also exhibit here. Then there are various French building societies which strive to provide the poor with cheap dwellings, together with every sort of charitable work to relieve distress and to combat alcoholism. All these things are very familiar to me, for I saw them in London at the Health Exhibition and have watched them grow in size while improving in quality from exhibition to exhibition. But of course the French exhibits at St. Louis cannot equal what they showed at their own incomparable exhibitions and notably at that of Paris in 1900.

Leaving the interior of the buildings and ascending towards the cascade the grandeur of the design gains upon the observer. It might be described as a design in water and whiteness. The waterfall is very fine and there is a lavish expenditure of water. Looking down from this eminence towards the principal avenue the buildings, with their colonnades, coated with cream white recalled somewhat the impression produced by the structures raised on the Place des Invalides in 1900. But the buildings lost somewhat in the appearance of size and majesty through the width of the space between them. They would have seemed bigger and more impressive if not so wide apart. On the other hand, when turning away from these main structures and looking in the other direction the amount of spare land was altogether an advantage. Here, in the dusk of the evening, I gazed down a bare, grass-covered hillside. Opposite, rising from the valley, stood forth the embattled walls which protected Jerusalem from the desecration of those who had not paid half a dollar for the right of entry. There were so few people about that the sight seemed very realistic. No other exhibition could have afforded the space to produce so natural an effect. Then from the vapour-veiled walls arose the piercing Arab music and the solitude invited a reverie of the far Orient. Lest, however, I should be accused of exaggerating the immensity of vacant space on the exhibition grounds I will quote the following passage from the World's Fair special correspondent to the *Chicago Record-Herald* published on Nov. 16th :—

> Two masked men held up and robbed the passengers and crew of a train on the miniature railroad at the fair Saturday night in true western style, securing money and valuables amounting to about $100, and then escaped. Of the three passengers one was a woman. The police say they have no clue to the robbers.

It is evident that if there was not a superabundance of room it would not be possible to stop and to rob even a miniature train without being seen. The music of the Orient penetrates not only in the solitudes near the canvas walls and plaster temples of Jerusalem. The Orient is very noisily represented at this exhibition. In the celebrated "Pike" I was agreeably surprised by the Cairo street, its size and many houses; a fairly good performance was given within but the Oriental dancing was quite as improper as anything seen in Paris.

But for downright wicked indecency it is only necessary to go next door. Here the offence is not only against propriety but against humanity. A syndicate, composed, it is stated, of a hardware dealer, a jeweller, a shoemaker, and a showman, has obtained a concession to run what they call a scientific institution! The show consists of baby incubators with living infants exposed in the most unsuitable surroundings. The air is drawn down a pipe from the back of the premises and forced into the incubators by a fan. At the air intake there are a railway line and a motor-car run, so that much dust is created. There is also a ladies' lavatory. Then come "the baby incubator café," a merry-go-round with its blaring machine organ, while on the other side of the incubators there are a large restaurant and the Cairo street. Opposite and around prevails the pandemonium for which the thoroughfare called the "Pike" has earned a world-wide

reputation The spectacular side shows, all the noise, dissipation, and foolery of the World s Fair are concentrated here, and yet it is on this spot that public showmen, shouting through speaking trumpets, profess to rear and to exhibit prematurely born infants It is difficult to conceive a more flagrant and indecent prostitution of what pretends to be medical science For the honour of America, be it said, the protests have been loud and fierce Among the local press the *Censor* has week after week denounced this 'death trap" this "angel making mill," and in the issue of Sept 22nd this paper published the statement that Attorney Bozier G Meigs of the Humane Society had written to the president of the Exposition Company *demanding the closure of this incubator show on the ground* that since its opening 43 babies had been taken in and no less than 39 had died The *New York Journal* stated that "it seemed undeniably true that the children taken to the incubators at the St Louis Exposition are treated ignorantly and neglectfully" But then there is money in it Half a dollar is charged for admittance and the daily receipts exceed $1000—indeed, they are stated to have amounted to $2760 on St Louis day To such low depths has a scientific matter been allowed to fall! The scandal has been so great that this much at least has been gained few, if any, babies now taken are prematurely born, so the show has become a sham, and this is a little more humane The *New York World*, the *Herald*, and the *Sun* have all published details about the "murder mill" of the fair, but it is still open and when I visited the establishment there were seven babies in the incubators, though they appeared to be fairly developed and not prematurely born But it is shocking to think that even normal infants should be made the object of a show in the midst of a howling country fair such as the "Pike" Throughout, however, the great defect is the total lack of dignity Any ignominious expedient, it does not matter how coarse, loud, vulgar, or ugly it is so long as it offers some prospect of bringing in a dollar or two is unhesitatingly adopted Visitors may be inconvenienced the grandeur of the exhibition marred, the honour of the enterprise compromised, it does not matter so long as there "is money in it" This is all the more regrettable as there is at St Louis the wherewithal to make a really grand and imposing exhibition

MANCHESTER.

(FROM OUR OWN CORRESPONDENT)

The Infirmary

THOSE of the public who take an interest in the Manchester Infirmary are concerned and somewhat excited about the central provision for accidents and emergencies At the
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infirma
to the trustees what it thought best upon the question of a central receiving house and out patient department In October last the committee recommended that there should be a central receiving house but no beds Three of the six lay members (there were two medical members) dissented, and proposed in a "minority" report that there should be at the receiving house a minimum of 12 beds and a maximum of 24 The medical staff are pretty unanimous against the beds, while some of the lay public are strongly in favour of them The former may, without any undue flattery of the profession, be assumed to have more practical knowledge on the matter than the laity, but some of the latter are becoming somewhat animated in their style of argument and remind me of the young man to whom Dr Johnson said "Sir, you raise your voice when you should strengthen your argument" The question is to be brought before the trustees on Dec 15th

Country Schools for Town Children

In July 1903, in a letter to the *Manchester Guardian* the
hester clergyman, made some
wn children into the country
education Happily they did
not fall to the ground but attracted the notice of Mr Herbert Philips who consulted Mr F C Horsfall and Mr Wyatt, the director of elementary education in Manchester. With Mr Perry's assent a letter was written to Mr. Levy, one of the Lewis trustees, by Mr Philips, himself a co trustee, the result being a grant of five acres of land near Mobberley at a "peppercorn rent" for a period of five years Afterwards several members of the Manchester and Salford Sanitary Association united themselves with the others, the approval of the Board of Education was obtained, the support of the Manchester head teachers was received, and the scheme was started A corrugated iron building with accommodation for 80 children (two classes) and two teachers was built and the school was opened in June last, when 40 boys from St Mark's, Ancoats, began the experiment After staying two weeks they were followed regularly by children from other schools In its report the committee acknowledges its debt to Mr Wyatt for his advice and help and says that his confidence in the value of the school has inspired it with hope that the small beginning may have a very useful influence on the system of primary education for the children not only of Manchester but of
of the value of
vill be improved
result will be a
ledge of country
life and may be looked on as the equivalent of foreign travel in the case of those more fortunately placed in the social scale Their eyes will be opened to many things about which they are absolutely ignorant or of which their ideas are of the vaguest and perhaps it may prove one of the influences that may lead them, as the phrase goes, "back to the land"

Amalgamation of St Mary's Hospital and the Manchester Southern Hospital

The subscribers to St Mary's Hospital and the Southern Hospital held meetings on Nov 24th, at which the scheme for amalgamating the two institutions was approved This will certainly prevent overlapping and may conduce to economy in working, which is unfortunately required by both The new St Mary s Hospital, as stated by the chairman, is "an ornament to the city and almost perfect in its arrangements and equipments" It is unfortunate, however, in its site which is at one of the busiest points in the city abutting on the street, where the traffic is noisy and incessant close to a busy railway station, and lying so low that perhaps it is more liable to fog than any position in the city In a maternity hospital where, moreover capital surgical operations are frequent, these conditions are and will remain, undesirable At the meeting of the friends of "the Southern," as it is usually called, the chairman stated that the negotiations had been conducted in a friendly manner, and that the result would be a great improvement in the work of the joint hospitals The new Southern Hospital is to be built in High street, Oxford-road, in close proximity to the new infirmary The land is in possession, the plans are ready, and building will, it is hoped, be begun early next year It will be used more especially for gynæcological and children s cases Each hospital as is usual finds that the calls on it are constantly increasing and each asks for more money, it is to be hoped with success

Dec 7th

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS)

Out relief in Bristol and Cardiff

THE Poor law inspectors of the Local Government Board have recently been calling the attention of the Bristol and Cardiff boards of guardians to the large increase in the expenditure upon paupers in the two unions Mr E B Wethered told the Bristol board that during the year ending Lady day, 1904 it had spent upon out relief £39 555 compared with £38 113 during the previous 12 months This increased expenditure, however, appears to have been more than met by a decrease in the cost of maintaining the indoor poor amounting to £2592 The cost per head of the census population for in maintenance and out relief during the last financial year was 3s 11½d and during the previous 12 months it was 4s 0½d Mr F T Burchan reminded the Cardiff board that during the past ten years its expenditure had increased 63 per cent while the actual increase in the number of paupers was 37 per cent The population of the union during the same period had increased 30 per cent and the rateable value 28 per cent

Bristol Hospital Sunday Fund.

The annual report of the Bristol Hospital Sunday Fund which has recently been issued shows that £1727 were collected in January last in 392 places of worship in the city. This sum is an increase of £162 upon that collected in 1903 in 329 churches and chapels. At the annual meeting of the supporters of the fund the Lord Mayor stated that there was a distinct falling off in the contributions from the wealthier parts of the city and in asking for more generous support he pointed out that the annual expenses of the four largest hospitals of the city exceeded their income by over £7000.

Education of Epileptic Children.

The education committees of the city of Bristol and of the counties of Somerset and Gloucester have for some time had under consideration the provision of a school for the education of epileptic children. A further step in the direction of providing a joint institution has now been taken and a committee of the Bristol education authority has been asked to report upon some definite scheme. The cost of a school to accommodate 100 children is estimated at £6000 and the alternative suggestions are that it should be erected and maintained at the joint cost of the three authorities or that it should be erected by one authority and that the others should pay a proportionate sum for each child sent to the school.

Bristol Cottage Homes.

Although the Bristol board of guardians has not yet come to an agreement with the Local Government Board as to the best way to deal with the sick poor in the Bristol workhouses no charge of neglect can be brought against the guardians with respect to the treatment of the children under their care. The aim of the board has been to keep all children who were not mere infants away from the workhouses. There are with this end in view in various parts of the city 16 homes, each accommodating from 15 to 20 children, and in the country 150 more children are living in special homes. At the end of November Mr. Walter Long, the President of the Local Government Board, formally opened a group of cottage homes which have been erected on a site of 20 acres at Downend. These buildings include 14 semi-detached houses, a larger house for 36 convalescent children, a small detached hall, and a porter's lodge. Each of the 14 houses accommodates 12 children and contains on the ground floor a children's day room, a small sitting room for the foster-mother, a kitchen, and a scullery; and on the first-floor two bedrooms for the children placed one on either side of the foster-mother's bedroom, which is provided with observation windows, a small bedroom for isolation, a bathroom, and a lavatory. The cost of the undertaking is about £20,000.

Poor-law Administration in Exeter.

At a meeting of the Exeter court of guardians held on Nov. 29th it was decided that the parish of Exeter should be divided into two districts instead of three as at present and that Mr. E. A. Brash, L.R.C.P. Lond., M.R.C.S. Eng., and Mr. G. T. Clapp, M.B. Cantab., M.R.C.S. Eng., should be the respective medical officers at salaries of £90 per annum.

Dec. 5th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Glasgow: Installation of Chancellor.

THE Right Hon. Lord Kelvin was on Nov. 29th installed as Chancellor of the University of Glasgow in succession to the late Earl of Stair. The occasion was one which evoked great interest, not only on account of the elevation of his lordship by the unanimous vote of the general council to the highest official position in the University, but on account of the distinguished list of graduates who received at the hands of the new Chancellor the honorary degree of Doctor of Laws, among whom was the Princess Louise (Duchess of Argyll). Principal Story as Vice-Chancellor presided and among the distinguished people present were: His Grace the Duke of Argyll, Lord Blythswood, Lord Glasgow, Sir James King, Sir James Bell, Sir Henry Craik, Principal Sir William Turner, Mr. Robert Gourlay, LL.D., Hon. James Hozier, M.P., and Mr. Parker Smith, M.P., with others representing different universities and public bodies. After Principal Story had opened the proceedings by reading prayer in Latin Dr. Smith, on behalf of the business committee of the general council, intimated the unanimous appointment of Lord Kelvin as Chancellor of the University of Glasgow, whereupon Sir James King moved that his lordship be now installed in that high office. The Vice-Chancellor then administered the required oath and the Chancellor signed the book and having been invested with his official robes took the chair amid great applause. Professor Glaister as dean of the Faculty of Law then presented the recipients of the honorary degree of Doctor of Laws. These were: Her Royal Highness the Princess Louise, Duchess of Argyll, who had acted as President of the Association for the Promotion of the Higher Education of Women from the time of its foundation in 1877 until 1893, when Queen Margaret College became the women's department of the University and when the association therefore ceased to exist; the Marquess of Ailsa; James Thomson Bottomley, M.A., D.Sc., F.R.S., for 24 years associated with Lord Kelvin in the teaching of natural philosophy in the University of Glasgow, being for that period Arnott and Thomson Demonstrator; James Donaldson, LL.D., Vice-Chancellor and Principal of the University of St. Andrews; the Right Hon. Sir John Charles Dalrymple Hay, Bart., Privy Councillor, and Admiral of the Navy; the Very Rev. John Marshall Lang, D.D., Principal of the University of Aberdeen; Guglielmo Marconi, the distinguished inventor of wireless telegraphy; Andrew Graham Murray, Secretary for Scotland; the Hon. Charles Algernon Parsons, the inventor and perfector of the steam turbine; and Sir John Ure Primrose, Bart., Lord Provost of the city of Glasgow. Thereafter Lord Kelvin delivered his address which was largely reminiscent and dealt with the great advance in the working power of the University within recent years. The address was listened to with much interest by all. Principal Story then pronounced the benediction and the proceedings terminated.

Anderson's College Medical School

The Medico-Chirurgical Society of the College held its annual dinner in St. Enoch's Hotel on Dec. 1st. About 80 persons were present. Professor R. Fullarton, honorary president of the society, presided and Mr. Watch and Mr. Duthie acted as croupiers. Among those present were many of the governors, also Sir Hector C. Cameron and Professor J. Glaister of the University of Glasgow; Professor Henry E. Clark, President of the Faculty of Physicians and Surgeons; Professor A. Macphail of St. Mungo's College; and Professor J. H. Nicoll, Professor C. C. Douglas, Professor R. B. Ness, Professor G. B. Todd, and Dr. J. G. Connal of Anderson's College. The evening passed off very pleasantly with the usual toasts and many songs.

University of Aberdeen Medical Society.

At a meeting of the above society on Dec. 2nd, Dr. James Clark being in the chair, Dr. G. M. Duncan, assistant professor of pathology in the University, read an interesting lecture on Trypanosomial Diseases before a very large audience. Before proceeding to the subject in hand Dr. Duncan congratulated the society on its progress and in felicitous terms described the benefits accruing from the existence of such societies. He then dealt with the geographical distribution of trypanosomial diseases and described the symptoms caused in different animals by the various diseases as having a more or less close resemblance—localised patches of œdema, emaciation, drowsiness, and muscular weakness. Sleeping sickness was then referred to. It occurred in Western Africa, from Senegambia in the north to St. Paul de Loanda in the south, extending inland along the Senegal, Niger, and Congo rivers, and also near Lake Nyanza. A peculiar feature of the disease was the length of time during which it might remain latent—as long as seven years. The onset was very insidious and the symptoms resembled those that occurred in animals, the disease being mostly confined to negroes. Puffiness of the face, a sad, heavy expression, and sinking of the head on the chest were well marked. A parasite, the trypanosoma, had been found to be the cause of the disease and was apparently conveyed by the tsetse fly. Its inoculation in monkeys caused the same symptoms as in man. In the rat's blood a trypanosoma was commonly found in this country but caused no manifest symptoms though in considerable numbers. The symptoms varied according as the parasite was present in the blood only or in the cerebro-spinal fluid also; in the former case they were classed as trypanosoma fever and this was preliminary to the disease proper, the mental symptoms appearing only when the parasite occurred in the cerebro-spinal fluid as well. It was a very fatal disease and had decimated whole districts. Dr. Duncan next proceeded to discuss

some recent work regarding the relationship between trypanosoma and the Leishman bodies The lecture was illustrated by numerous lantern slides which were much appreciated The close attention accorded to Dr Duncan and the hearty vote of thanks awarded to him on the motion of the chairman bore abundant testimony to the thorough grasp which the lecturer had of the subject and to the lucid and interesting manner in which he had handled it

Death of Dr E B Hector

Dr Edward Bateman Hector, Castle Douglas, died on Dec 3rd He had an extensive practice in Castle Douglas and district He belonged to Montrose and came from a practice in Yorkshire to Castle Douglas six years ago He took the degree of M B, C M Edin in 1883 and that of M D in 1902 Dr Hector was a son of the late Mr Alexander Hector, tacksman of salmon fishings at Bervie and a younger brother of Mr Alexander Hector who continued is lessee after his father's death The deceased gentleman was about 50 years of age

IRELAND

(FROM OUR OWN CORRESPONDENTS)

Hygiene in National Schools

A DEPUTATION of representative members of the medical profession in Dublin was received on Nov 11th by Dr W J M Starkie, Resident Commissioner of National Education It included the President of the Royal College of Physicians of Ireland, the President of the Royal College of Surgeons in Ireland the President of the Royal Academy of Medicine in Ireland the President of the Leinster Division of the British Medical Association, the President of the Royal Veterinary College and two members of the General Medical Council Sir William Thomson said that they represented the signatories of a petition addressed to all the educational authorities of the United Kingdom urging the teaching of hygiene and temperance in primary and secondary schools and he put before the Commissioner a short history of the origin and progress of this movement He said that the immediate purpose they had in bringing this subject forward was to submit to the Commissioners whether it would not be possible to include in the public course of instruction in elementary schools lessons on the advantages of cleanliness, pure air, pure food, &c, and, moreover to make this teaching compulsory On the other hand he those subjects which might be ing examination the danger of regard to examinations being obvious Sir Christopher Nixon desired to emphasise two points in connexion with what had been said The first was that elementary instruction in hygiene and temperance should be given at the earliest age, so that as the child commenced to learn the principles of the Christian religion he should also learn the principles of bodily health and that cleanliness is next to godliness' He did not accept Sir William Thomson's view in not requiring an examination of an elementary kind in the subject of public health and considered that there was a necessity for providing a catechism of public health in order that the study of what was necessary for the body should be dealt with in the same way as that which concerned the child's spiritual well being Dr Starkie delivered a long and interesting reply in which he said that he was thoroughly in favour of spreading as far as possible the knowledge of hygiene in the schools and stated definitely that in the preparation of a new edition of the programme he would advocate to his colleagues on the Board its being made a compulsory subject He said that he considered examinations in such a subject as hygiene unnecessary Mr A Chance in returning thanks on behalf of the deputation to the Resident Commissioner for their very courteous reception, said that the reply which Dr Starkie had made produced the impression on him that their efforts had not been entirely successful

Royal College of Surgeons in Ireland

A meeting of the council of the Royal College of Surgeons in Ireland decided on Dec 1st, on the motion of Sir Charles Cameron, to confer the honorary Fellowship of the College on Dr Anthony Traill as the first member of the medical profession occupying the distinguished position of Provost of Trinity College

Rotunda Hospital Dublin

A meeting of the board of governors of the Rotunda Hospital took place on Dec 2nd, Mr R O Brien Furlong, C B, being in the chair A letter was received from Sir Arthur Macan thanking the board for his recent election as governor The secretary reported the death since the last meeting of Dr William C Neville, pathologist to the hospital, an announcement which was received with much regret The Master nominated Dr Roy S Dobbin as clinical clerk

Dispensary Medical Officer's Fees

A curious situation has arisen in Kilkeel Co Down, where, owing to an acute affection of the ear, one of the dispensary medical officers, Mr H E Evans applied to the board of guardians on Nov 30th for leave of absence for three days to get further special advice He nominated Dr E Floyd of Kilkeel as his substitute at four guineas per week The guardians would only promise three guineas per week which Dr Floyd declined as the Irish Medical Association, of which he is a member had fixed on four guineas as the sum binding on their members, and Dr Floyd refused to take less The board declined to appoint a substitute on the terms named so Mr Evans must remain and perhaps lose his hearing or in case he leaves for further advice, the district may be left without the services of a medical man. Dr Floyd generously offered to do duty for nothing but could not continue to do so in case of a longer absence than three days on Mr Evans's part

Lisburn Board of Guardians

As a contrast to the action of the Kilkeel board of guardians it is pleasant to find the Lisburn board of guardians passing unanimously and cordially the following motion —

That this board desire to express their admiration of the splendid services rendered by two of their medical officers Dr Orr of Ballylesson and Dr Mussen of Glenavy who for 40 years have discharged their duties with to a single complaint having been made against them and further desire to express their thanks to these gentlemen for their kindness and attention to the poor amongst whom they are placed

Visit of Lord and Lady Dudley to Ulster

Their Excellencies the Lord Lieutenant and the Countess of Dudley arrived in Belfast on Dec 5th and in the evening Lady Dudley distributed the prizes in the Ulster Hall to the pupils of the Municipal Technical College On the 6th their Excellencies visited the People's Palace and the Countess of Dudley opened the Homes for the Cripple Children of Ireland A cordial vote of thanks, moved by the Right Hon Thomas Sinclair D L, and seconded by the Profes or J W Byer M D R U I was accorded to Lady Dudley On the 7th their Excellencies visited Newry where the Lord Lieutenant opened a bazaar for the Newry Fever Hospital and the Countess of Dudley was presented with an address from the Newry District Nursing Society

The Belfast Workhouse

At an extraordinary meeting of the Belfast board of guardians held on Dec 1st special reference was made to the congest that in case it would be accommodation The Local Government Board the necessary inspectors said that they never saw anything so bad as the present condition of the workhouse and stated that in the block where there were 700 infirm men the building was packed from the ground floor to the top loft and the smell was most offensive It was utterly unfit for human beings to be placed in

Health of Belfast

At the monthly meeting of the city corporation held on Dec 1st it was reported that the small pox epidemic still continued there having been five fresh cases during the previous week The number of cases of infectious disease notified has increased especially scarlet fever of which 56 cases had been reported between Oct 23rd and Nov 19th, while during the same period 63 cases of enteric fever had been reported The death rate from all causes was 18 4 per 1000

Ballymena Cottage Hospital

At the annual meeting of the friends of this hospital on Dec 1st special reference was made in the medical report to the loss sustained by the hospital in the death of the late Dr J Stuart There had been 80 intern and 15 extern patients during the year The income from all sources was

£524 and there was a balance, after paying all expenses, of £50.

Cork Hospital Saturday Fund and Hospital Aid Society.

At a meeting of the committee of the Cork Hospital Saturday Fund the following allocation was made:—North Infirmary, £80; South Infirmary, £80; Mercy Hospital, £45; Victoria Hospital, £36; Fever Hospital, £36; Eye, Ear, and Throat Hospital, £34; St. Patrick's Hospital, £36; Erinville Hospital, £21; and Cork Maternity, £12. On the same day the committee of the Hospital Aid Society distributed the following sums:—North Infirmary, £86; South Infirmary, £86; Mercy Hospital, £62; Victoria Hospital, £68; Eye, Ear, and Throat Hospital, £52; St. Patrick's Hospital, £33; Erinville Hospital, £33; Cork Fever Hospital, £20; Cork Maternity, £10; and Queenstown Hospital, £20.

Dec. 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Radio-active Bodies.

AT a recent meeting of the Academy of Sciences M. Tomasini made a very interesting communication. It is well known that one of the properties of the recently discovered emanations—namely, x rays, "n" rays, and the rays from radium—is their power of fixing themselves in bodies which are submitted to their action, which bodies themselves become a source of active radiations. They are only temporary sources of energy, for they rapidly lose their new property, the rate of loss depending on the nature of the body and the length of time during which it has been submitted to the radiation in question. Air, for example, inclosed in a vessel and submitted to the action of radium becomes radio-active for some hours after the radium has been removed. It is the same with water. M. Tomasini exposed various substances to the action of the x rays and has come to the conclusion that they thus become capable of giving off similar rays for a certain time afterwards in a gradually decreasing quantity. The intensity of the impregnation varies with the energy of the source of radiation and with the degree of ionisation of the body exposed to the rays. It next occurred to him that by charging with the x rays certain drugs intended to be decomposed within the body he would increase the facility of such decomposition and would make the action of the drug in question more active than usual by producing it in the nascent state. Iron, for example, would combine much more energetically with the red blood corpuscles than when given in the usual way. Here, then, is a new line in therapeutics which may not improbably give rise to interesting results.

Illness caused by Leeches.

At a recent meeting of the Hospitals Medical Society M. Mantel gave an account of an interesting case. A man, aged 34 years, who was in vigorous health went to Tunisia where he resided many months and where he drank the impure water of the country. After some time he began to spit blood every day and suffered from attacks of vomiting and melæna, at the same time becoming cachectic. Phthisis or malaria was suspected but auscultation revealed nothing wrong. Examination of the throat showed the presence of an expansile tumour and a second examination under a good light made it plain that this tumour was a leech, *bdella nilotica*. It was easily removed by forceps, all the symptoms cleared up, and the patient rapidly regained his strength.

Dec. 6th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Medical Journal.

A NEW medical journal—the *Medicinische Klinik*—has just made its appearance in Berlin. The editorial committee includes 26 names, the great majority being those of professors at German and Swiss universities. The most widely known of these gentlemen are probably Professor Ehrlich of Frankfort, Professor von Leyden of Berlin, Professor Neisser of Breslau, Professor von Strümpell of Breslau, Professor Eichhorst of Zürich, Professor Gaffky of Berlin, Professor von Mering of Halle, and Professor Marchand of Leipsic. The acting editor is Privat-docent Dr. Brandenburg of Berlin. The first issue of the *Medicinische Klinik*, which is well printed on good paper, contains an article by Professor von Leyden on the organotherapy of Graves's disease. He commences by explaining that the function of the thyroid gland is to neutralise the toxic substances produced by metabolism. When this function is no longer performed, either on account of atrophy or on account of extirpation of the gland, the symptoms known as myxœdema develop, whilst a hyperplasia of the gland leads to an auto-intoxication in the form of Graves's disease. He then alludes to the experiments of Dr. Ballet and Dr. Enriques of Paris, of Dr. Burghard and Dr. Blumenthal of Berlin, and of Professor Lanz of Utrecht, proving that the blood serum of dogs deprived of the thyroid gland and of patients suffering from myxœdema has an antitoxic action against Graves's disease. Professor Lanz discovered that the same was the case with the milk of goats similarly treated and he accordingly prescribed their milk for patients suffering from Graves's disease. As certain patients disliked the milk because of its peculiar taste, Dr. Burghard and Dr. Blumenthal succeeded in separating the active substance which they termed "rodagen." Dr. Madsen of Copenhagen devised another method, in which the dried blood of goats deprived of the thyroid gland was employed, the blood being pulverised and administered in the form of tablets or pills. The results obtained by this preparation are said to be satisfactory. Professor Möbius of Halle has used the blood of wethers which had been deprived of the thyroid gland, giving it either by subcutaneous injection or by the mouth. Professor von Leyden states that he has used rodagen as well as the preparations of Professor Möbius and Dr. Madsen and found them all similarly efficacious. Rodagen being the preparation most easily obtainable in Germany is his favourite remedy. As a rule, an obvious improvement is obtained in from three to four weeks, though in severe cases the treatment may have to be continued for several months. The daily dose varies from three teaspoonfuls to four tablespoonfuls. Another interesting article in the *Medicinische Klinik* is contributed by Professor Bier of Bonn on the Treatment of Pseudarthrosis by Subcutaneous Injections of Blood. He has observed that when there is considerable hæmorrhage between the ends of a fractured bone it seems to have a good effect in promoting union, and copious hæmorrhage produces a voluminous callus. The importance of hæmorrhage for the formation of new bone is proved by the fact that complicated fractures and fractures where an operation is performed for the better coaptation of the displaced fragments unite much more slowly than other fractures because there is no hæmorrhage in these cases. He therefore attempted the treatment of pseudarthrosis by subcutaneous injections of blood and now gives details of three cases which came under his care from 13 to 14 months after the injury. From 15 to 25 cubic centimetres of defibrinated blood were repeatedly injected, the result being that a callus was formed after about four weeks and firm union was obtained within a relatively short time.

Dispensaries for Infants.

The protection of infant life is a subject now receiving much attention from the municipal authorities of Berlin, who have decided to establish dispensaries where the mothers of infants may obtain advice as to feeding them and may, if necessary, be supplied with milk and other food free of charge. Four such dispensaries have been already provided, the sum of 40,000 marks (£2000) having been granted for that purpose. It is expressly stated in the rules that food will not be supplied gratuitously for longer than a week except in the case of necessitous persons.

Rats on Shipboard.

When the British steamer *Blagdon*, loaded with wheat, arrived at Hamburg on Nov. 24th a great many rats were found among the cargo. The port medical officer, fearing the possibility that plague might exist among them, at once ordered that the cargo should remain on board and that the captain and crew should be conveyed to the isolation hospital of the port. Similar precautions were taken with regard to the crew of the Hamburg steamer *Hermia* to which some of the cargo had been transhipped. The dock labourers engaged in the unloading of the vessel were medically examined and both vessels were not only thoroughly disinfected but also

put into quarantine No case of plague however, has occurred and the microscopical examination of the rats has proved negative

Dec 5th

NEW YORK

(FROM OUR OWN CORRESPONDENT)

Chemicals in Imported Foods

AT a meeting of the New York Academy of Medicine held on the evening of Nov 17th the views expressed by Mr H W Wiley chief of the Bureau of Chemistry of the United States Department of Agriculture were unanimously endorsed Mr Wiley, in an address on the Influence of Preservatives and Adulterants in Food on Public Health condemned the existing methods and his written an order at the request of the Secretary of Agriculture to go into effect on Jan 2nd, providing that all food products imported will be required to show on the labels of the original packages just what preservatives were used in preparing the food other than the accepted ones such as salt sugar vinegar, and wood smoke In the course of his address Mr Wiley said that there were conditions in which the use of preservatives of a chemical nature might be permissible but he asserted that he could see none for a country like America where food is abundant and is procurable in its fresh state without difficulty He thought that persons who preferred the preserved foods should have the right to procure and to consume them but their sale to the general public to be eaten as wholesome and fresh goods he considered a direct fraud Dr G L Peabody Health Commissioner Thomas Darlington Dr Rowland G Freeman and Dr A Jacobi concurred with Mr Wiley's views but the chairman Dr Andrew H Smith, while agreeing with him, advised against precipitate action and said that he was inclined to believe that a judicious use of preservatives would be a measure of safety rather than of danger

New York St John's Guild

The annual report of this society has recently been published It states that during the past summer the floating hospital has carried 4916 babies 15 443 children and 7467 mothers, a total for the season of 27 826 The seaside hospital at New Dorp during the same period has accommodated 668 infants, 900 children, and 688 mothers making a total of 2256 The disaster to the *General Slocum* the pleasure steamer which was burned in New York Bay, with fearful loss of life, had the result of decreasing the number of persons carried on the daily trips of the floating hospital

Impure Air of New York Subway

Soon after the New York subway was opened complaints from passengers as to the impurity of the air therein began to pour in The situation has since become more aggravated and the daily papers of New York are flooded with letters from suffering citizens It was at first thought that the trains would act like pistons and suck pure air into the subway from the streets at the stations Unfortunately, this theory has failed in practice and the agreement is general that the air in the New York subway is unpleasant if not dangerous Various schemes of ventilation have been suggested, most of which are altogether impracticable The *New York Times*, however, has proposed that conservatories should be started in the subway, so that the plants might take up the carbonic acid, separate the carbon equivalents therefrom and liberate the oxygen The process would probably be too slow for practical purposes and requires sunlight

New French Hospital

M Jusserand French Ambassador to the United States,

of which two floors are occupied by private rooms and small wards The remainder of the building contains the medical and surgical wards, the operating rooms, the pathological laboratory, and the quarters of the medical staff, while the top floor, which is completely isolated, contains wards for tuberculous patients

Report of the Surgeon General of the United States Army

the United States 1904, has recently [illegible] of strength of the whole army for disease and injury during the past calendar year shows an improvement over that of 1902 the rates being 1451 13 and 1716 51 respectively This reduction in the prevalence of disease and injury serves to further show the gradual improvement in the condition of the troops which has been noted since sanitary matters have been given the attention due to them Notwithstanding the fact that a mean strength of 25 379 troops were on foreign service during the year disease for disability numbered but 1882 equivalent to a rate [illegible] were recorded with 23 32 in [illegible] year While [illegible] high as last year [illegible] being slightly more than half the rate of 1902 The number of cases and rates per 1000 of mean strength for disease in the army reported in the calendar year 1903 were as follows admissions 83 093 rate 1228 45, discharges for disability 1462 rate 21 61 and deaths 475, rate 7 02 Those for external causes admissions 15 063 rate 222 68, discharges for disability 120, rate 1 77, and deaths 154, rate 2 28 The admission rate in the United States per 1000 for disease and injury was 1206 89 and death rate 5 94 compared with 1343 77 and 7 83 in 1902 Of this rate 961 50 men per 1000 were admitted and 4 12 died from disease, and 245 39 were admitted and 1 82 died from external causes The Pacific Islands and China furnished 44 767 admissions to sick report during the year equivalent to a rate of 1879 54 per 1000 men, of which 53 were discharged on surgeon's certificate of disability and 375 died, giving rates of 2 23 and 15 74 respectively per 1000 of mean strength From Cuba and Porto Rico 2384 admissions to sick report were reported, equivalent to a rate of 1527 23 per 1000 of mean strength with rates of discharge for disability and death of 19 86 and 1 92 respectively These figures show a most satisfactory condition from a health standpoint and demonstrate clearly the results of earnest efforts on the part of those in charge of sanitary affairs affecting the health of the troops The rate of admission from disease was 1241 51, of discharge 19 22 and of death 1 28 per 1000 men serving in Cuba and Porto Rico, while corresponding rates for injuries were 285 72 0 64 and 0 64 per 1000 The small amount of cholera in the Philippine Islands as compared with the previous year, says the report speaks well for the untiring efforts of the army medical officers in preventing its spread among the troops serving at the island stations The sanitary improvements in the conditions of the soldiers have gradually lessened the rates of sickness and mortality since the war, and although a large proportion of the troops have been on practically war service in the Philippine Islands since 1898, the rates of sickness and mortality for the calendar year 1903 more nearly approximate those of 1897—when the low death rate of 5 11 per 1000 since the outb[illegible] and quarters [illegible] satisfactory, a[illegible] has been lesse[illegible] ings and to make [illegible] to obtain sanitary quarters from every standpoint and consequently diminished rates of sickness and mortality

Prize Awarded at St Louis to Dr Simon Baruch of New York

Dr Simon Baruch the well known authority on baths in America and to whose propaganda and initiative are due the free baths of New York has been awarded by the superior jury of awards of the Louisiana Purchase Exposition a silver medal for his exhibit, consisting of drawings, plans of construction, and explanatory texts and statistics showing the economic value of free cleansing baths the cost of construction and maintenance, &c The object of the exhibit was to impress upon municipal authorities the importance of providing for the poor means of personal cleanliness

Nov 28th.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND—The following gentlemen having passed the necessary examinations and having conformed to the by-laws have been admitted Members of the College:—

Louis Arthur Arnould, Tom Bates, and John Arthur Bell, St Bartholomew's Hospital; John Avery, London Hospital; William George Aviss, University of Birmingham; John Herbert Baukes, St. George's Hospital; Henry Edward Barrett, St. Mary's Hospital; John Foster Beale, B.A. Camb., University of Cambridge and London Hospital; Arthur Reginald Beaumont and Arthur Morris Benett, Guy's Hospital; Charles Harold Berry and John Henry Douglas Bolton, University College Hospital; Antonio Blanc and John Harold Burridge, King's College Hospital; George Henry Boyden, University of Edinburgh, Owens College, Manchester, and St. Thomas's Hospital; Arthur Carnarvon Brown, St. Bartholomew's Hospital; Arthur Hill Burnett, University of Edinburgh and London Hospital; Geoffrey Carlisle, Guy's Hospital; Hubert Chitty, University College Hospital; Sidney Herbert Clarke, B.A.Camb., University of Cambridge and London Hospital; Alfred Philip Coker, L.S.A. Lond., Middlesex Hospital; John Cook, University College, Cardiff, and Guy's Hospital; David Kirkpatrick Coutts, St. Thomas's Hospital; Albert William Duncan Coventon, M.A., B.C. Camb., University of Cambridge and St Bartholomew's Hospital; George Frederick Dalton, M.D., C.M. Kingston, Kingston, Ontario, and Middlesex Hospital; Thomas Sidney Davies, University College, Bristol; Henry Roy Dean, University of Oxford and St. Thomas's Hospital; George De la Cour, University College Hospital; Clarence Hamul Denyer, Guy's Hospital; Fernand Louis De Verteuil, University of Edinburgh, St. Thomas's and King's College Hospitals; Charles Marshall Dickinson, London Hospital; George Reginald Ernst, M.D. Rush Medical College, Zurich and Berlin; George Jewel Evans, St. Mary's Hospital; Charles Roland Babington Eyles, St. Thomas's Hospital; Richard Felton, Guy's Hospital; Lionel Cecil Ferguson, St. Bartholomew's Hospital; Allan Rigden Finn, St. Mary's Hospital; William John Fordham, University College, Sheffield; Frank Forrest, University of Edinburgh and Victoria University, Manchester; Colin James Galbraith, King's College Hospital; Henry Hardwick-Smith, M.A. Camb., University of Cambridge and St. Bartholomew's Hospital; Alfred Ernest Underwood Hawkes, L.S.A. Lond., St. Mary's Hospital and University College, Liverpool; Edwin Claude Hayes, University of New Zealand and St. Bartholomew's Hospital; Samuel Clifford Hayman, University College, Bristol, Thomas Bonhote Henderson, M.B., B.Ch. Oxon., University of Oxford and St. Thomas's Hospital; William Robert Higgins, University of Cambridge and London Hospital; Ludovic Hill, St. Mungo's College, Glasgow, and Middlesex Hospital; James Clarence Ledeatt Hingston, Middlesex Hospital; Reginald Felix Vere Hodge, B.A. Camb., University of Cambridge and St. George's Hospital; Augustine Henry Hudson, St Thomas's Hospital; Charles Leonard Isaac, University of Cambridge and St. Mary's Hospital; Basil John Francis Jackson-Taylor, University College, Bristol, and King's College Hospitals; Frank Alexander Gallon Jeans, M.A. Camb., University [illegible] College, Liverpool. Edwin Charles [illegible] pital; George Francis Jones, Univer[illegible] Wynn Jones, University College, [illegible] Kerr, University of Cambridge a[illegible] Frederick Charles Rienzi Malins K[illegible] fax Kynaston, and Arnold Leemi[illegible] Browning Lathbury and Edward [illegible] mew's Hospital, George Laurence, [illegible] and St. George's Hospital, Walter [illegible] Leeds, and St. George's Hospital, [illegible] University of Cambridge and Guy's Hospital; John Macarthur and Reginald Henry Miller, St. Mary's Hospital; John McCrae, B.A., M.B. Toronto, Universities of Toronto and Montreal; James [illegible] of Birmingham; William Thomas [illegible] ospital; William Mayhew Mollison, [illegible] of Cambridge and Guy's Hospital; William Parry Morgan, M.A. Camb., B.Sc. Lond., University of Cambridge, University College, Cardiff, and St. Mary's Hospital; John Pindon Murphy and John Papa Nicolas, London Hospital; Andreas Nell, Ceylon Medical College, University College and Charing Cross Hospitals; Lionel Edward Close Norbury and Evan Williams Parry, St. Thomas's Hospital; Charles William O'Brien, St. Bartholomew's Hospital; Cadwallader Edwardes Palmer, B.A. Camb., University of Cambridge and St. Thomas's Hospital; Christopher Parker, L.R.C.S. & P. Edm., L.F.P.S. Glasg., [illegible] Ralph Newman Poignand, B.A. Camb. and St. Thomas's Hospital, Laurence [illegible] Birmingham; Griffith Henry Rees and Frederick Rogerson, Guy's Hospital, Alexander Reute, University College, Liverpool; Henry Gates Sievwright, University College, Cardiff, and St. Mary's Hospital; James Donald Sinclair, University of Edinburgh; William Herbert Smailes, University of Leeds; George Renalds Southwick, M.D. Harvard, Harvard and Boston Universities; Maurice Spotswood, University of Liverpool; Claude Maberley Stevenson, Guy's Hospital; Henry Vernon Swindale, Middlesex Hospital; Alfred George Sworn, University College Hospital; William Arthur Tatchell and James Turtle, London Hospital; Richard James Campbell Thompson, St. Thomas's Hospital; Arthur William Wakefield, University of, [illegible] eophilus Ralph Waltenburg, [illegible] Owens College, Manchester; [illegible] Keith Willis, B.A. Camb., [illegible] holom[illegible] Barth[illegible] y of [illegible] Hospital.

UNIVERSITY OF CAMBRIDGE.—Professor E. G. Browne, M.B., has been elected by the Indian Civil Service Board to represent it on the General Board of Studies.—Mr. F. F. Blackman, St. John's, has been elected Reader in Botany in succession to Mr. F. Darwin, M.B., F.R.S.—At a Congregation on Nov. 24th the following degrees were conferred:—

Bachelor of Medicine.—H. D. Hoffman, Trinity.
Bachelor of Medicine and Bachelor of Surgery.—S. Child, Pembroke; and S. Dodd, Caius.

At the Congregation on Dec. 3rd the following medical and surgical degrees were conferred:—

Bachelor of Medicine.—C. W. P. Moffatt, Clare; E. Ward, Clare; D. H. Fraser, Gonville and Caius; and J. Lambert, Downing.
Bachelor of Surgery.—C. W. P. Moffatt, Clare; and S. H. Nathan, Trinity.

Dr. D. MacAlister has been re-appointed a member of the General Board of Studies, the Special Board for Medicine, and the Board of Geographical Studies.—The Master of Downing (Dr. A. Hill) has been appointed a member of the Board of Agricultural Studies and Dr. B. Anningson a member of the State Medicine Syndicate. Professor R. Stockman of Glasgow has been appointed Examiner in Pharmacology in the place of Sir T. R. Fraser, who is unable to examine.—Professor E. Waymouth Reid, M.B., of Dundee, has been approved for the Sc.D. degree.—By the efforts of Professor G. Sims Woodhead a sum of £1600 has been collected in Huddersfield for the foundation of a lectureship in special pathology. The General Board recommends that the endowment be gratefully accepted by the University and that a "Huddersfield Lecturer" be appointed.

VACCINATION GRANT.—The Local Government Board vaccination grant has been awarded to Mr. John Campbell, L.R.C.P. & S. Irel., public vaccinator No. 3 District, Goole Union, Yorks.

A CASE of plague was discovered during the week in a steamer entering the Thames. The patient was immediately isolated.

UNIVERSITY OF BIRMINGHAM.—The annual dinner of the Medical Faculty of the University of Birmingham took place at the Grand Hotel, Birmingham, on Nov. 30th. The company numbered nearly 300 and the gathering was presided over by Dr. C. E. Purslow who was supported on his right by Sir Frederick Treves and on his left by the Chancellor of the University, the Right Hon. J. Chamberlain, M.P. A pleasant feature of the proceedings was the presentation to Professor B. C. A. Windle, the retiring dean of the Faculty who has just been appointed by favour of His Majesty to be President of Queen's College, Cork. Professor Windle went to Birmingham in 1882 and has held the position of dean for 15 years. Dr. Purslow said that as a professor of anatomy Professor Windle had proved himself a brilliant teacher, an admirable organiser, and a strict disciplinarian, as well as a true friend of the University. Sir Frederick Treves, after some humorous remarks regarding after-dinner speaking, made some interesting points in his speech. He said that a university to be a success at the present time must—on account of the enormous changes which had taken place in science—at least be young, and also that the theoretical value of Latin and Greek no one wished to discuss, but the thing of absolute, undoubted, practical importance was applied science. There was no kind of inducement offered for a man to follow into the career of science. This was a deplorable thing as in Germany it was encouraged in a very substantial manner. Mr. Chamberlain, in the course of a very humorous speech, said that he was afraid for all time to come probably science and the conferring of great benefits upon one's fellow creatures must be to a large extent its own reward. But the pursuit, the research, was an impossibility so long as the actual means of existence were wanting. Unfortunately they had far fewer pious benefactors in this country than they had in the United States of America. He also said, in discussing elementary and secondary education, that they were spending very little upon the highest education—a deficiency which still had to be supplied. Mr. Chamberlain concluded his observations on the subject by saying: "I do not perhaps share the opinions of some of my friends and opponents, who seem to think that education would be a cure for everything—would be even a satisfactory specific for a 100 per cent. tariff; but I

do believe that it is one of the things which go to make the intellectual predominance and even the material position of a nation. I think it is a thing which we have too much neglected, and I hope that more attention will be paid to it in the future."

CENTRAL MIDWIVES BOARD.—The members of the Central Midwives Board met on Dec. 1st at 6, Suffolk-street, Strand, Dr. F. H. Champneys being in the chair. The first business for which the Board had been called together was to hear and to decide upon the charges of signing false certificates in connexion with examinations of the Obstetrical Society of London alleged against a certified midwife on the midwives' roll. A medical certificate was produced for the consideration of the Board stating that the midwife in question was suffering from a sharp attack of influenza and was quite unfit to leave her house, whereupon the case was postponed till January next. A communication was received from the Royal British Nurses' Association notifying that Mrs. Josephine Latter had been elected a member of the Board in the place of Miss D. Oldham whose resignation was accepted at the last meeting of the Board. Dr. J. Ward Cousins informed the Board that he had been asked for an opinion concerning the notification by midwives of stillbirths and he stated that he would be glad to know how the matter stood. The Midwives Act, 1902, provided that the certificate under the Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner or that she is authorised to grant any medical certificate or any certificate of death or of stillbirth. According to the rules framed by the Central Midwives Board under Section 31 of the Midwives Act, 1902, under the heading of "Notification" midwives must in all cases where a registered medical practitioner is not in attendance as soon as possible after the occurren[illegible] supervising [illegible] the matter l[illegible] give a certificate in regard to a stillbirth and the Midwives Act, 1902, had not altered that. The chairman then informed Dr. Ward Cousins that the following form of notification of the birth of a stillborn child for the use of midwives had been submitted by the Board to the Privy Council:—

To the Local Supervising Authority of *the Administrative County or *the urban or [illegible]

Certificate No [illegible] t on the day [illegible] at [illegible] of a stillborn *male or *female child, no registered medical practitioner being in attendance.

Name of midwife [illegible]
Address of midwife [illegible]

* Strike out the words not applicable.

The Board adjourned to Dec. 22nd.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine was held at the University on Dec. 6th, Dr. J. Kingston Fowler the Dean, being in the chair. On the motion of Mr. H. W. Page, seconded by Dr. W. Hale White, it was unanimously resolved:—

[illegible]

The committee as constituted consists of the 34 members of the Faculty named below, representing the various schools of medicine of the University and the various subjects of study in the advanced curriculum. In the course of the discussion, which was carried on by Dr. W. P. Herringham, Sir Felix Semon, Dr. R. Percy Smith, and Dr. W. D. Halli- [illegible] the conclusions arrived at by [illegible] an important bearing on the [illegible] in London. In view of the large issues involved the Dean requested any member of the committee or of the Faculty who desired that any special point should be considered to communicate his wishes addressed to the honorary secretary of the Faculty of Medicine at the University. The members of the committee are as follows: Dr. J. K. Fowler, Mr. A. Pearce Gould, Dr. J. R. Bradford, Dr. Sidney H. C. Martin, Mr. W. Watson Cheyne, Dr. R. H. P. Crawfurd, Dr. Norman Moore, Dr. W. P. Herringham, Dr. G. Schorstein, Dr. W. Bulloch, Dr. W. Hale White, Dr. Lauriston E. Shaw, Mr. H. H. Clutton, Dr. H. G. Turney, Dr. H. D. Rolleston, Dr. A. C. Latham, Mr. H. W. Page, Dr. H. A. Caley, Mr. Stanley Boyd, Mr. H. F. Waterhouse, Dr. F. de Havilland Hall, Dr. E. P. Paton, Dr. Samuel West, Miss J. Cock, Sir Felix Semon, Sir Thomas Stevenson, Sir E. Cooper Perry, Dr. F. H. Champneys, Mr. A. H. Cheatle, Dr. R. Percy Smith, Dr. E. C. Seaton, Dr. F. W. Mott, Mr. R. Marcus Gunn, and Mr. Morton A. Smale. The Faculty also considered the following report of the Board of Advanced Studies to the Senate—

[illegible]

and resolved without dissent that the Faculty approves of the report of the Board of Advanced Studies on tropical medicine.

ERRATUM.—In THE LANCET of Dec. 3rd, p. 1619, under the heading University of London, in the list of honours for the M.B., B.S. examination, a * was inadvertently prefixed to the name George Johnson Langley, thus making him appear to have been "bracketed equal for the University Medal." This was not the case.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156
The Art of Creatic [illegible] By Edward Carpenter, Auth [illegible] isation," &c. Price 5s. net

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta street, Covent garden, W.C.
Practical M [illegible] ferine Therapeutics. for Stud [illegible] Macnaughton Jones, M.D., M.C. [illegible] Causal, Royal Uni- versity of [illegible] s. net.
Watsham's [illegible] For the use of Students [illegible] edition, revised and largely re [illegible] M.A., M.B., B.C. Cantab., [illegible] the London Tem- perance Hospital, Surge[illegible] at the London Lock Hospital. Price 10s. 6d. net

BLACK, ADAM AND CHARLES, Soho square, London, W.
Familiar London Painted by Rose Barton. Price 20s. net
Who's Who, 1905 Price 7s. 6d. net. Who's Who Year-book, 1905.
[illegible] Seventh year of [illegible] Emily Janes, Women Workers [illegible]

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne
Under the Care of the Japanese War Office. By Ethel McCaul, R.R.C. With Illustrations from Photographs. Price 6s.

GRIFFIN, CHARLES, AND COMPANY, LIMITED, Exeter-street, Strand, W.C.
Year-book of the [illegible] and Ireland [illegible] and Art during [illegible] Government [illegible]
Twenty-first Annual [illegible]

[illegible], 13, Furnival street, E.C.
[illegible] r sheets, each measuring 13 inches by [illegible] three months.) First year of issue. Price not stated

HIRSCHWALD, AUGUS[illegible] [illegible]nfallen. Eine Aerztliche [illegible] n, Geh. In Verbindung [illegible] ebreich, Med.-Rath Dr [illegible] rof. Dr. und Dr. A. Ma[illegible] George Meyer in [illegible]

HODDER AND STOUGHTON, 27, Paternoster-row, E.C.
The Arris and Gale Lectures on the Neurology of Vision. By J. Herbert Parsons, B.S., D.Sc., F.R.C.S., Assistant Ophthalmic Surgeon, University College Hospital. Price 2s. 6d. net.

JOHN BALL, SONS, AND DANIELSSON, LIMITED, 83-91, Great Titchfield-street, Oxford street, W.
Climate and Health in Hot Countries and the Outlines of Tropical Climatology. By Lieut.-Col. G. M. Giles, M.B., F.R.C.S., Indian Medical Service (Retd.). Price 7s. 6d. net. Part II. (Tropical Climatology) is published separately, price 6s. net.

KIMPTON, HENRY, 13, Furnival street, Holborn, E.C.
Diseases of the Heart. A Clinical Text-book for the Use of Students and Practitioners of Medicine. By Edmund Henry Colbeck, B.A., M.D., B.C. Cantab., F.R.C.P. Lond., D.P.H. Cantab., Physician to Out-patients at the City of London Hospital for Diseases of the Chest, Victoria Park, E. Second edition, revised and enlarged. Price 7s. 6d. net.

LEWIS, H. K., 136, Gower-street, W.C.

Aequanimitas. With other Addresses to Medical Students, Nurses, and Practitioners of Medicine. By William Osler, M.D., F.R.S., Professor of Medicine, Johns Hopkins University, Baltimore. Price 7s. 6d.

Landmarks and Surface Markings of the Human Body. By Louis Bathe Rawling, M.B., B.C. Cantab., F.R.C.S. Eng., Senior Demonstrator of Anatomy, St. Bartholomew's Hospital. Price 5s. net.

Transactions of the Dermatological Society of Great Britain and Ireland. Edited by Arthur Shillitoe, F.R.C.S., and Wilfrid B. Warde, M.D. 1903–1904. Volume the Tenth. Price 5s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

A Text-book of Medical Practice for Practitioners and Students. Edited by William Bain, M.D. Durh., M.R.C.P., Lond. Price 25s. net.

Transactions of the Clinical Society of London. Volume the Thirty-seventh. Price not stated.

MACMILLAN AND CO., LIMITED, London.

The Cambridge Natural History. Edited by S. F. Harmer, Sc.D., F.R.S., and A. E. Shipley, M.A., F.R.S. Vol. VII. Hemichordata, by S. F. Harmer, Sc.D., F.R.S. Ascidians and Amphioxus, by W. A. Herdman, D.Sc. [illegible] clusive of the Systematic Account of [illegible] Sc.D., F.R.S. Fishes (Systematic Account of [illegible]), by G. A. Boulenger, F.R.S. Price 17s. net.

Life and Letters of Edward Byles Cowell, M.A., Hon. D.C.L. Oxon., Hon. LL.D. Edin., Professor of Sanskrit, Cambridge, 1867–1903. By George Cowell, F.R.C.S. Price 12s. 6d. net.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, 8, Hastings-street, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. On a Parasite found in Persons Suffering from Enlargement of the Spleen in India. Second Report. By Lieut. S. R. Christophers, M.B., I.M.S. (On special duty.) New Series. No. 11. Price, Rupees 2, or 3s.

ORIENT PRESS, 26, Paternoster-square, E.C.

The Wisdom of the East Series. Edited by L. Cranmer-Byng and Dr. S. A. Kapadia. The Religion of the Koran. By Arthur N. Wollaston, C.I.E., Translator of the Anvar-i-Suhaili; Author of an English Persian Dictionary, &c. Price 1s. net.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Light Energy: its Physics, Physiological Action and Therapeutic Applications. By Margaret A. Cleaves, M.D., Fellow of the New York Academy of Medicine, Fellow of the American Electro-Therapeutic Association, Professor of Light Energy in the New York School of Physical Therapeutics. Price 21s. net.

An Atlas of Human Anatomy. For Students and Physicians. By Carl Toldt, M.D., Professor of Anatomy in the University of Vienna; assisted by Professor Alois Dalla Rosa, M.D. Translated from the Third German Edition and adapted to English and American and International Terminology by M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. Sixth Section: G. Neurology; H. The Organs of the Senses. Price 16s. 6d. net.

RUDALL, CARTE, AND CO., 23, Berners street, W.; and 7, Queen-street, Dublin.

The Professional Pocket-book, or Daily and Hourly Engagement Diary for 1905. Specially adapted for Professional Engagements. (Published according to the plan of the late Sir Julius Benedict.) Price not stated.

SAUNDERS, W. B. AND COMPANY, Philadelphia, New York, and London

An Introduction to Pharmacognosy. By Smith Ely Jelliffe, M.D., Ph.D., Professor of Pharmacognosy and Instructor in Materia Medica and Therapeutics in Columbia University (College of Physicians and Surgeons), New York. Price 10s. 6d. net.

Gall-stones and their Surgical Treatment. By B. G. A. Moynihan, M.S. Lond., F.R.C.S., Leeds. Price 17s. net.

THACKER, SPINK, AND CO., Calcutta.

Malarial Fevers and Malarial Parasites in India. By Major Andrew Buchanan, M.A., M.D., Indian Medical Service. Second edition. Enlarged. Price 6 Rupees.

UNIVERSITY PRESS, Cambridge (C. J. CLAY AND SONS, Ave Maria-lane, London).

Morphology and Anthropology: a Handbook for Students. By W. L. H. Duckworth, M.A., Fellow of Jesus College, Cambridge, University Lecturer in Physical Anthropology. Price 15s. net.

Studies from the Anthropological Laboratory, the Anatomy School, Cambridge. By W. L. H. Duckworth, M.A., Fellow of Jesus College, University Lecturer in Physical Anthropology. Price 10s. net.

WILEY, JOHN, AND SONS, New York (CHAPMAN AND HALL, LIMITED, London).

A Text-book of Physiological Chemistry. By Olof Hammarsten, Professor of Medical and Physiological Chemistry in the University of Upsala. Authorised Translation from the Author's Enlarged and Revised Fifth German Edition. By John A. Mandel, Sc.D., Professor of Chemistry and Physics and of Physiological Chemistry in the New York University and Bellevue Hospital Medical College. Fourth edition. First thousand. Price 17s. net.

WRIGHT, JOHN, AND CO., Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)

Diseases of the Ear: For Practitioners and Students of Medicine. By James Kerr Love, M.D., Aural Surgeon, Glasgow Royal Infirmary; Lecturer in Aural Surgery, St. Mungo's College, Glasgow. (With 54 Stereoscopic Photographs and other Illustrations.) Price 25s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ATKINSON, J., has been appointed Medical Officer and Public Vaccinator for the Lynton District of the Barnstaple Union.

BANNERMAN, WILLIAM, M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the North District of the Cirencester Union.

BENNETT, H. S., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

BIRKS, G. T., M.B., B.C. Cantab., has been appointed Resident House Surgeon at St. Thomas's Hospital.

BIRT, A. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

BRADFORD, A. B., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Ophthalmic House Surgeon at St. Thomas's Hospital.

BRODRIBB, F. A., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

BULLEY, F. M., M.R.C.S., L.R.C.P. Lond., has been appointed to the Skin Department at St. Thomas's Hospital.

CABLÉ, FREDERICK C., M.B. Lond., M.R.C.S., has been appointed Senior Clinical Assistant to the Throat Hospital, Golden square, W.

CARVER, N. C., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

COUTTS, D. K., M.R.C.S., L.R.C.P. Lond., has been appointed to the Throat Department at St. Thomas's Hospital.

DAVIES, D. L., M.B., B.S. Lond., has been appointed Certifying Surgeon under the Factory Act for the Wisbech and Walsoken District of the counties of Cambridge and Norfolk.

DAY, LEIGH, M.B., B.Ch. Oxon., has been appointed Honorary Assistant Surgeon to the Essex and Colchester Hospital.

DELANY, K., L.R.C.P.I., L.R.C.S.I., has been appointed Certifying Surgeon under the Factory Act for the Carrick-on-Shannon District of the county of Leitrim.

DITTMAR, F., M.D. Glasg., D.P.H. Cantab., has been appointed Medical Inspector of the Local Government Board of Scotland.

EWART, R. W. T., M.B., C.M. Edin., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

FARQUHARSON, J. MALCOLM, M.B., F.R.C.P. Edin., has been appointed Second Assistant Surgeon to the Ear, Nose, and Throat Department of the Royal Infirmary, Edinburgh.

FOOTNER, G. R., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

GIBSON, A. G., M.B., B.Ch. Oxon., has been appointed Resident House Physician at St. Thomas's Hospital.

GRAY, R. E. G., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

GUTHRIE, T., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed to the Ear Department at St. Thomas's Hospital.

HALL, DONALD G., M.A., M.D. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the Sussex County Hospital, Brighton.

HARNETT, W. L., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed to the Skin Department at St. Thomas's Hospital.

HARVEY, FRANK, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Padstow (Cornwall) Urban District.

HAWARD, W., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

HIGHAM, B., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

JONES, EDWARD T., M.R.C.S. Eng., has been appointed Medical Officer of Health of the Borough of Helston, Cornwall; Medical Officer to the [illegible] No. 1 District; and Public Vaccinator [illegible]

KISCH, H. [illegible] Lond., has been appointed House Surgeon [illegible] Thomas's Hospital.

MACLAREN, NORMAN, B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Cumberland Infirmary.

NORBURY, L. E. C., M.R.C.S., L.R.C.P. Lond., has been appointed to the Ear Department at St. Thomas's Hospital.

PARRY, E. W., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Obstetric House Physician at St. Thomas's Hospital.

PINCHES, H. I., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Obstetric House Physician at St. Thomas's Hospital.

ROGERS, J., L.R.C.S.I., L.R.Q.C.P.I., has [illegible] Surgeon under the Factory Act for the [illegible] county of [illegible]

SEARS, C. N., [illegible] to the Th[illegible]

SHAW, W. F., M.B., Ch.B. Vict., has been appointed [illegible] and Resident Obstetric Assistant Surgeon to St. Mary's Hospital, Manchester.

STANNUS, H. S., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Ophthalmic House Surgeon at St. Thomas's Hospital.

TAKAKI, K., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

TENCH, M., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Dunmow District of the county of Essex.

VAUGHAN, J. C. F. D., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

WHITTING, R. E., M.B., B.C. Cantab., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

[illegible] oria-street, London, S.W.—Examina- [illegible] than 25 Commissions in the Royal

[illegible] nt House Physicians, unmarried, for [illegible] rate of £25 each per quarter, with

[illegible] AND THROAT HOSPITAL.—Assistant

[illegible] L HOSPITAL. [illegible] Salary £150

[illegible] , Garlands— [illegible] rising to £150,

[illegible] LM, Grayingwell.—Junior Salary £150 per annum,

[illegible] OSPITAL.—Assistant House [illegible] annum with board, lodging

[illegible] nt Demonstrator of

[illegible] nt Medical Officer for [illegible] as per annum, with

[illegible] Honorary Surgeon.

[illegible] JEWISH HOSPITAL.—Resident Medical Officer Salary commencing £60.

NEW HOSPITAL FOR WOMEN, 144, Euston road, N.W.—Assistant Surgeon (female).

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Physiology Salary £600, with fees.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney road, Bethnal green, E.—Pathologist and Bacteriologist. Salary £50 per annum, [illegible]

[illegible] AL.—Assistant House Physician. Also Salary £100, with board, lodging, and

[illegible] FIRMARY.—Junior Resident Medical £120 per annum, with apartments, [illegible]

for 1906. [illegible] , Pall Mall East, S.W.—Milroy Lecturer

ROYAL EAR HOSPITAL, Dean street, Soho, W.—House Surgeon, non-resident. Small honorarium.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months Salary £40 per annum, with board, washing, and residence.

SWANSEA GENERAL AND EAR HOSPITAL.—House Physician Salary £75, with board, apartments, washing, and attendance. Also Assistant House Surgeon. Salary £50 per annum, with board, apartments, washing, and attendance.

TOTTENHAM HOSPITAL, London, N.—Assistant Physician Honorarium 20 guineas per annum [illegible] Honorary Anæsthetist and Honorary

[illegible] —Resident House

[illegible] edical Officer, un- [illegible] with apartments,

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for a Certifying Surgeon under the Factory Act at Halesowen, in the county of Worcester, and at Helston, in the county of Cornwall.

Births, Marriages, and Deaths.

BIRTHS.

MCNEIGHT.—On Dec. 5th, at St. Johns park, Blackheath, S.E., the wife of W. R. P. McNeight, M.A., M.D. T.C.D., of a daughter.

RICHARDS.—On Dec. 4th, at Croydon, the wife of J. Stewart Richards, M.D., B.S., of a daughter.

MARRIAGE.

GIRVAN—WOODS.—On Dec. 5th, at the parish church, Beccles, Suffolk, Alec Girvan, M.D., F.R.C.S. Edin., to Delia E. Woods, daughter of Alfred Woods, C.C., Beccles.

DEATH.

HALL.—On Nov. 29th, at 6, Navarino-road, Worthing, William Richards Hall, late Registrar Medical Society of London, in his sixty third year.

Notes, Short Comments, and Answers to Correspondents.

THE "FOLLOW UP" ADVERTISEMENT.

A CORRESPONDENT has forwarded us a letter which she has received from the "Lady Manager" of the Espanola Medicine Company, *alia* our old acquaintance Pointing of "Anti Dipso" fame. The Espanola Company sell a grease which is dignified by the name of Diano and which it is pretended will increase the size of the female bust. Our correspondent, whose sole address on Pointing's letter is the somewhat vague one of "London, W.," was apparently too sharp to be taken in by Pointing's specious statements, for she has received the usual "follow up" letter which is so characteristic of American quack advertising This epistle would melt the heart of a stone. For sheer self sacrifice and altruism we have rarely seen anything to come up to it "Possessed as I am," says the lady manager, "of the means to make my sisters beautiful, to give them a new joy in life, my life's object is to fulfil my mission, and that I wish to do at all costs Therefore, upon coming across your inquiry the other day, I decided to have a consultation with our medical staff upon your case' The medical staff decided that our correspondent should be placed "on a footing with other women who have taken the treatment," and that it would be better even if the company lost money than that she

"30 day half-price offer'

that it is difficult to believe

necessary, but where it is a good work for the national welfare it is easier to comprehend" Insolent slush of this sort may deceive some persons, but we should very much like to know how any Government can allow such obvious swindles to be carried on without let or hindrance. We have already pointed out what an absolute fraud is Anti Dipso and we say the same thing of Diano. No rubbing of grease or taking of "tonic tablets" will increase the size of the mammary glands, and despite all the testimonials and photographs showing the same we maintain that the whole thing is a swindle. Nor is it true that thin and flat-chested women are, to use Pointing's elegant phraseology, necessarily such as "have no life, spirit, or the real passion of true love, they lack vigour and have no vital force; they are weak and impotent and lack snap, fire, and vitality." If all unqualified practice is not to be stopped quacks of all kinds should at least be made to pay for a licence. As we have said over and over again, no one can sell tobacco without a licence, which does not in any way guarantee the purity of the article sold. Therefore, all quacks should be made to pay a heavy annual licence. Pointing can afford to pay £60 or £70 a month for a page advertisement in a certain magazine, therefore he should be made to pay an annual licence of at least £1000

CIGARETTE PICTURES.

To the Editors of THE LANCET.

SIRS,—The juvenile cigarette smoker is catered for very generously, both physically and morally. The tobacco (?) cannot be good for his body and the accompanying picture can be still less good for his mind. I inclose a picture recently given to me by a friend who desired me to draw attention to the matter as publicly as possible. Surely it is scandalous that such things should be allowed. One hears a good deal about the unhealthiness of tobacco and its imitations for young people, but I think even they are less unhealthy than "photographs" such as the inclosed I am, Sirs, yours faithfully,

Nov. 28th, 1904 EAST LONDON PRACTITIONER.

*** Our correspondent incloses a photograph which we quite agree with him is not good for the budding youth. It represents a woman with a bad figure who has apparently nothing on but a fan. The fan so as to be as much out of the way as possible is at the back of her head. We say that she has "apparently" nothing on because on a close inspection she seems to be clothed in skin tights but the photograph is obviously meant to give the idea of nudity and though we do not for a moment mean to say that studies from the nude are necessarily indecent, yet we are quite certain that the photograph in

[illegible] inquired at some 16 East-end shops for these cigarettes but all the salesmen except one denied any knowledge of them and that one said he never had kept them and never would. So the evil is probably not very widespread.—*Ed. L.*

VENTILATION OF RAILWAY TUNNELS.

AT the Engineering Congress held in connexion with the recent International Exhibition at St. Louis, U.S.A., Mr. Francis Fox, M.Inst.C.E., read a paper in which he mentioned that the use of a large ventilating fan in railway work was first applied in March, 1870, by Mr. Ramsbottom at the Lime-street tunnel of the London and North-Western Railway in Liverpool. The London *Engineer* of Nov. 25th in its summary of the proceedings states that Mr. Fox thought that if the Metropolitan and Metropolitan District railways of London were not about to be worked by electric traction it would

be absolutely necessary to apply mechanical power for putting the air of their tunnels into a satisfactory condition. "If railway engineers would adopt for tunnels the same rules as are applicable to mines much of the difficulty would disappear." The paper discussed the degree of atmospheric purity to be aimed at and described the ventilating methods of the Severn, the Mersey, and other tunnels, including the plan devised by M. Saccado—of the Italian railways—for utilising the fan on the injector principle. (The Saccado system of ventilation of railway tunnels was described at some length in THE LANCET of Feb. 27th, 1904, p. 592.) Mr. C. S. Churchill, chief engineer of the Norfolk and Western Railway, U.S.A., also read a paper on the same subject, describing American as well as European practice. He said that fans were used in several cases for city, mountain, and submarine tunnels. The Saccado system has been adopted at two points on the Norfolk and Western Railway, the fans being placed at the larger end of the injector nozzle which delivered air around the perimeter of the tunnel. This system has effected great improvements. The blast cleared the tunnel very quickly, eliminating the former discomforts and dangers to which the railway men were subjected and preventing the moisture which generally collected on the rails in tunnels. With the drier air the oxidation of the rails was reduced and on the walls there was little of the fungus growth which in a damp tunnel tended to cause decay or disintegration of the lining.

MR. ALABONE AND MR. STEAD.

ALTHOUGH the education of public opinion in the matter of false and misleading quack advertisements appears a well-nigh hopeless task we feel in duty bound to notice from time to time the most glaring instances of falsehood or deception. We know that our medical brethren in general practice are constantly being confronted with tales of marvellous cure cut out from some otherwise reputable lay journal, and asked by patients to explain, to controvert, or to allow an imitation of the treatment so luridly and incorrectly described. It may perhaps serve in such instances to be able to produce forthwith a paragraph or two under the ægis of THE LANCET and for this, if for no wider reason, we deal from time to time with the matter. The instance which concerns us now is the *Review of Reviews* and Mr. Alabone. Certainly the editor of the *Review of Reviews* has shown himself on so many occasions to be a person of such distorted mental vision that it might well be considered that any object thoroughly approved of by him would be thereby unworthy of the attention of sensible men and women. In the article we refer to upon "Dr." Alabone so many specific statements that are entirely untrue are made that it may, for the reasons above mentioned, be worth while briefly to dispute one or two of them. It is stated, for instance, that the Brompton Hospital refused to test Mr. Alabone's "cure." The fact is, that so far from refusing the Brompton Hospital actually offered to devote a ward to the genuine trial of the treatment; the offer was refused by Mr. Alabone on grounds which sufficiently showed the false nature of the claims that he makes. Again, so far is it from being true that the "cure" has been neglected by the medical profession, that two medical men of position—Dr. Arthur C. Latham and Dr. C. Slater of St. George's Hospital—carried out an investigation as to the nature of lachnanthes, the essential element in Mr. Alabone's "cure." Their results justify the slight value in which the medical profession hold this drug just as fully as Mr. Alabone's behaviour and that of his friends justify the removal of his name from the Medical Register and the small regard paid by medical men to his asserted achievements.

DELIVERY OF BREAD.

To the Editors of THE LANCET.

SIRS,—I have both in the medical and lay press for years advocated a more cleanly delivery of bread. Bread has to go through so many hands and these being working hands (even our servants) cannot always be clean. I have suggested that every loaf (or two loaves) should be placed in an oil paper bag and sealed up in the bakehouse; the bag need not be opened until it reaches the breakfast-table. I believe the cost would work out at a farthing, which most would only too gladly pay.

I am, Sirs, yours faithfully,

Manchester-square, W., Nov. 26th, 1904. THOMAS DUTTON.

NATURAL MUMMIES.

IN *Knowledge and Scientific News* for November there is an interesting article on the well-known preserved bodies found in certain tombs of the Church of Venzone in North Italy. In the course of one year or less, more certainly in two, says the writer, such bodies, clothed and placed in wooden coffins, are, as a rule, completely transformed and become dry and light and yellowish-grey in colour. The skin remains intact and resembles parchment; the bones are perfect, held in place by the dried ligaments and articular capsules, more or less covered with muscular and tendinous fibres which, with the nerves and blood-vessels, adhere together in a desiccated mass. Teeth, hair (beard, eyebrows, eyelashes), and nails are all preserved in astonishing perfection, the fluid parts of the body alone disappearing. When extracted from the tombs the mummies are covered with a layer of dark yellowish mould or fungus that disappears little by little, and the cutis, at first blackish and flexible, becomes a pale yellow, in colour and texture exactly like sheepskin. They are extremely light in weight, varying from three to six kilogrammes. It is notable that the phenomenon occurs not only in the parish church but also in the Chapel of St. Catherine, a little to the east of Venzone. At Ospedaletto, too, three miles nearer Gemona, five similar tombs are known to exist in the ancient Priory of the Santo Spirito. Such a phenomenon has naturally produced many theories but, so far as we know, no definite scientific explanation has been given. The writer points out that in 1829 Dr. Ciconi suggested that the desiccating agent might be calcium sulphate, which, in a more or less anhydrous form, and mixed with calcium carbonate, constitutes the soil of Venzone and Ospedaletto. As anhydrous sulphate of lime was the principal substance used by Hunter in his process for preserving the human dead body Dr. Ciconi suggested that the imperfect desiccation occurring in some of the tombs would be due to their having been excavated above or below the preservative layer. Marcolini in 1831, the writer continues, put forward a hypothesis that the acidification of the soil by hydro-carbo-phosphates might be the cause owing to which the natural processes of corruption were inhibited. Stringeri maintained the same idea a decade later. But Dr. Zecchini in 1861 and Dr. Paré (director of the Hospital at Udine) in 1868-70, independently brought forward the theory that the desiccation was produced by a parasitic mould. Other similar mummies have been found in the Cathedral of Toulouse, in the Church of St. Michael in Dublin, and in an ancient Servite Monastery near Bonn.

Duped.—If our correspondent's predecessor has removed outside the radius agreed upon we do not see that there is any remedy. Notices of removal frequently appear as advertisements and undoubtedly this form of publicity is occasionally abused. We doubt, however, if our correspondent can make out a case to which the General Medical Council would be likely to pay attention.

J. W. H.—There has certainly been no "honourable mention" of the appliances in question in our columns of recent years and we know nothing whatever of the methods of the firm. We have an idea that very many years ago they manufactured certain appliances in accordance with the instructions of medical men, and doubtless it was of these that we spoke.

A Welsh Medical Student makes no attempt to dispute the substantial accuracy of the statements on which our annotation was based nor does he provide us with any reason for changing our opinion that the good results which religion yields are likely to be intensified if the problems of life are handled in a sober and dignified fashion.

Fairplay.—It does not appear clear from the cutting inclosed whether the guardians are trying to exceed their powers or not. In any case their arrangements will require the sanction of the Local Government Board which can probably be trusted to see that the laws are observed.

C. E.—The condition is by no means an uncommon one and though a little obstinate usually yields completely to intelligent treatment. In this case our correspondent might well seek for his patient the assistance of a surgeon possessing special familiarity with such diseases.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

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WEDNESDAY [illegible] .M.), University College (2 P.M.), Roy[illegible] 30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (15th).—St. Bartholo m [illegible] (3 30 P.M.), University College (2 [illegible] George's (1 P.M.), London (2 P.M.), [illegible] 30 P.M.), [illegible] thern Ce[illegible] London Throat (9.30 A.M.), St. Ma[illegible] .M. and 2.30 P.M.), Throat, Golden-square, [illegible] .).

FRIDAY [illegible] P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9. 30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

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SOCIETIES.

MON. [illegible] LONDON (11, Chandos street, [illegible] rs.—Dr E R Hunt Sub- [illegible] The Surgical Treatment of [illegible]

TUE. [illegible] (22, Albemarle street, W) [illegible] Legal Specimens Dr H [illegible] Littlejohn Discussion on Degeneration its Causes and Preven [illegible]

[illegible] square, W C)—8 P M Address. Prof. R T. Hewlett Antitoxins Mr R M. Holmes Notes on some Recent Additions to the Museum

W [illegible]

F [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

[illegible]

(Medical.) 5 15 P M. Mr A Lane Some Points in Abdominal [illegible]

(Surgical.) 5 15 P M Dr I Guthrie Mental Overstrain in [illegible]

[illegible] pital, N)—4 30 P M. Lecture-Demonstration—Mr de Prender [illegible] Anæsthetics.

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(Taken daily at 8.30 a m. by Steward's Instruments.)

THE LANCET Office, Dec. 8th, 1904

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A M
Dec 2	29·83	S W		59	52	48	45	47	Dull
" 3	29 71	S W	0·04	54	48	44	44	44	Foggy
" 4	29 70	S.W.		57	54	44	48	50	Dull
" 5	29 63	S W	0 08	65	53	43	48	50	Dull
" 6	29 43	S W	0 14	49	49	49	48	49	Raining
" 7	29 23	W	0 77	47	47	46	46	47	Foggy
" 8	29 57	N W	0·02	46	40	36	36	37	Fine

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An Address

ON

THE OPERATIVE TREATMENT OF THE CONDITIONS OF THE GASTRO-INTESTINAL TRACT WHICH RESULT FROM CHRONIC CONSTIPATION.

By W. ARBUTHNOT LANE, M.S. LOND., F.R.C.S. ENG.,

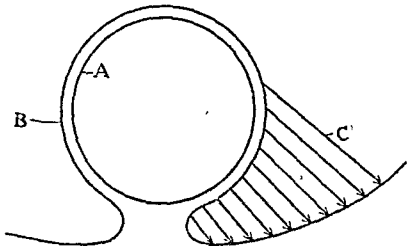
SURGEON TO GUY'S HOSPITAL AND SENIOR SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

GENTLEMEN,—In this address I propose to consider in a detailed manner the causation, pathology, symptoms, and treatment of the changes in the gastro-intestinal tract which result from, and are associated with, the habitual over-loading of the large bowel. Let us commence by analysing the several *structural alterations* which are present in cases of this sort. They differ somewhat in the several portions of the alimentary tract. The first we will consider is an increase of the calibre of the bowel or its dilatation.

Dilatation with corresponding lengthening is a very marked feature in certain portions of the intestine. For instance, the cæcum becomes much elongated and its lumen considerably increased. In consequence its lower extremity reaches finally the floor of the true pelvis, which cavity it may fill. The transverse colon becomes lengthened and dilated. In advanced cases it forms a loop, the lower limit of which reaches to or below the brim of the pelvis where it comes into relationship with the displaced cæcum. The rectum becomes abnormally enlarged and in operative procedures more freely accessible from above than under normal conditions. The small intestines are dilated, this characteristic [illegible] In [illegible] n. [illegible] *coats* [illegible] upper [illegible] wall. This may progress to such an extent that a considerable proportion of the peritoneal covering of the large bowel becomes adherent to the adjacent peritoneum, the area of bowel covered by normal peritoneum becoming in conse- [illegible] of [illegible] normal. A certain amount of obstruction to the passage of fæces from the sigmoid [illegible] present in these cases, [illegible] loop of necessity twists [illegible] cases that complete intestinal obstruction results owing to the twist or rotation of the overloaded elongated loop becoming sufficient to close completely the passage of material from the sigmoid loop into the bowel beyond. It will thus be seen that the so-called volvulus of the sigmoid flexure occurring spontaneously and not as an after-effect of an abdominal operation is a phase of a condition of partial obstruction of long standing, the loop being habitually over-distended with intestinal contents and the passage of fæces beyond interfered with. I do not think that acute volvulus ever occurs spontaneously or that a perfectly normal sigmoid flexure can suddenly become twisted so as to form an immediate obstruction. The same remarks apply with equal truth to volvulus of the cæcum.

I have in Figs. 1 and 2 represented diagrammatically this process of progressive fixation of the large bowel which takes place in a very large proportion of cases. The first figure represents a transverse section of the ascending colon or of the upper part of the cæcum seen from above, the line B indicating the peritoneum covering the gut and the adjacent portion of the abdominal wall external to it, while the line A shows the position of the muscular and mucous coats. The arrows C show the direction in which fixation takes place, the adhesions beginning at the reflection of the mesentery from the outer wall of the bowel. These adhesions may exert such

FIG. 1.

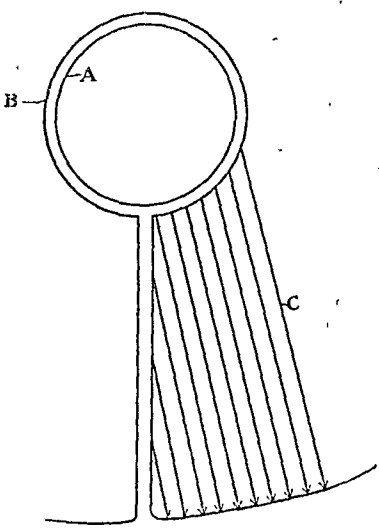


A, Muscular and mucous coats. B, Peritoneum. C, Direction of adhesions.

a strain on the bowel as to reduce its calibre very materially, especially at certain points. This is much exaggerated by any distension of the bowel below a constriction and may be so great that the intestine becomes occluded at this point. Such a condition of obstruction not infrequently exists in the large bowel on the right side at the level of the iliac crest where the abrupt change from a firm bony relationship to that of a flaccid muscular wall renders the production of a kink more easy.

Fig. 2 represents a transverse section through the sigmoid flexure and meso-sigmoid and the peritoneum covering the iliac fossa external to the meso-sigmoid. As in the last

FIG 2.



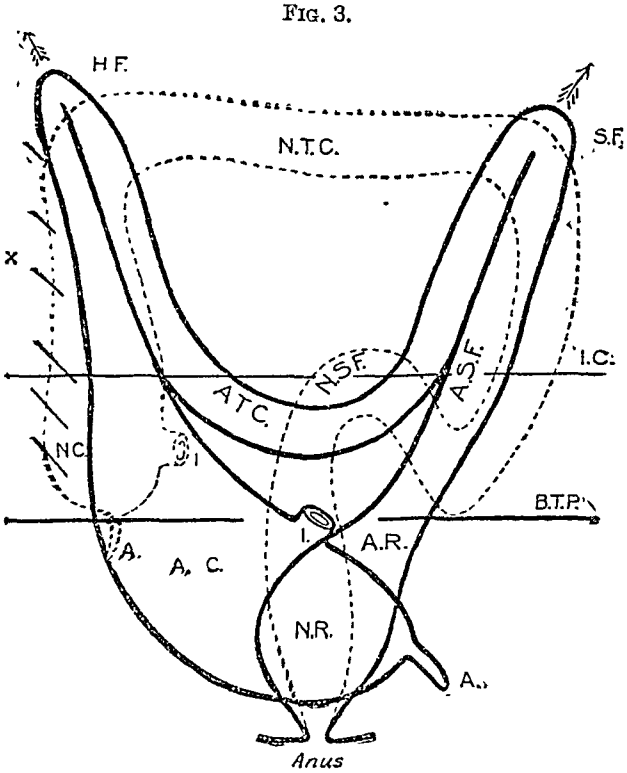
A, Muscular and mucous coats. B, Peritoneum. C, Direction of adhesions.

diagram the line B indicates peritoneum and the line A the bowel. Owing to the possession of a mesentery of some considerable length the bowel is at a much greater distance from the abdominal wall than the cæcum and ascending colon which are immediately adjacent to it and the mode of fixation differs somewhat in detail from the last described.

In the conditions I am describing the outer surface of the mesentery is gradually brought down to its base by the formation of adhesions till the surface of the sigmoid flexure is fastened to the floor of the iliac fossa. Afterwards, this portion of bowel becomes attached progressively to the adjacent peritoneum just in the same manner as in the case of the cæcum and ascending colon. The mode and direction of the formation of these adhesions are represented by arrows C. Associated with the gradual fixation of the sigmoid loop there is an accompanying diminution of its lumen and of its length, so that finally the bowel which normally forms a loop of considerable size moving freely at the end of a long mesentery, becomes a shortened, straightened, constricted tube attached by a considerable area of its circumference to the abdominal wall, as if it had no mesentery. In proportion as the bowel becomes fixed and unable to perform its functions with freedom and facility so its muscular coat wastes. This state of fixation and shortening of the sigmoid flexure with wasting of its muscular coats is of great importance surgically since it renders any operation on this portion of the bowel more difficult than under normal conditions. The strain exerted upon the hepatic and splenic flexures by the overloaded cæcum, ascending colon, and transverse colon results in the formation of broad bands of adhesions amounting to a mesentery, which by their contraction drag these flexures upwards and outwards beyond their normal positions, producing kinking of the bowel at the flexures. This is much more marked at the hepatic than at the splenic flexure because of the heavier load sustained there and of the greater abruptness of the angle existing between the ascending colon and the transverse colon.

Again, where the surfaces of the ascending colon and descending colon come into apposition with the transverse colon adhesions form and this further interferes with the passage of material through the lumen of the bowel already constricted at the flexures. This is shown in Fig. 3.

FIG. 3.



N. C., Normal colon. N. T. C., Normal transverse colon. N. S. F., Normal sigmoid flexure. N. R., Normal rectum. A. C., A. T. C., A. S. F. and A. R. represent the alteration in position. X, Acquired adhesions forming false mesentery.

Fig. 3 represents diagrammatically many of the changes which the large bowel undergoes in consequence of the habitual interference with its functions by constipation. The normal condition is shown as a dotted line while the firm outline illustrates the modifications which take place in consequence of habitual overloading. N. C., N. T. C., N. S. F., and N. R. indicate what may roughly be regarded as the normal cæcum, transverse colon, sigmoid flexure, and rectum; while A. C., A. T. C., A. S. F., and A. R. these parts in their altered state. B. T. P. and I. C. lines of the brim of the true pelvis and of the iliac The appendix is left free from adhesions or deformity not to render the diagram too complicated. The which form between the appendix and the adjacent port of the iliac fossa are situated external to it. They commen at the cæcum and gradually extend along the length the appendix, seldom reaching beyond the junction of middle and outer thirds. Though the process of adhes commences at the cæcum from above downwards length of the band diminishes and its strength increas The adhesions are quite distinct from, and lie external the mesentery of the appendix. The result of this arrang ment is that when the cæcum is loaded the strain exerts upon the proximal portion of the appendix caus that structure to become flexed abruptly at the lower lim of its adhesions. For the time being its lumen is reduce or occluded at the junction of the distal and mobile port with the fixed proximal part, the secretions of the form being dammed up and producing an inflammation of varyin intensity. The constant recurrence of obstruction to th escape of the excretions from a greater or shorter lengt of the appendix may lead to the formation of a calculus.

Though the above is a very common mode of attachment the appendix there are, however, other varieties. For in stance, if the distension of the cæcum occurs at an early period of life before its descent in the abdomen to the situation it occupies later the much elongated appendix may lie vertically behind the ascending colon and cæcum its upper extremity reaching high up into the loin posteriorly, being fixed by, and involved in, the acquired adhesions which bind down the outer wall of the ascending colon and cæcum to the abdominal wall. Or, again the appendix may not have acquired any adhesions till the cæcum has been forced down on to the floor of the true pelvis where it may become attached to any structure in the vicinity. This is especially the case if any abscess has formed about it. The chief factor which determines these several changes is an overloading of the large bowel and of that portion which serves more especially as the cesspool of the gastro-intestinal tract—namely, the cæcum and ascending colon. The excessive distension of this portion of the tract results very largely from the erect or sedentary posture habitually assumed during the greater part of the 24 hours in civilised communities. This is exaggerated in the woman by the constriction of the waist and in both sexes by the imperfect development of the muscles in the abdominal wall. Even in the act of defecation in our present state of civilisation the cæcum is driven downwards and forwards into the true pelvis, tending to drag and displace downwards the right kidney, the individual losing in the sedentary position the enormous pressure afforded by the forcible apposition of the thigh and abdomen which is exerted when the squatting position of uncivilised life is assumed. Not only does this squatting posture help to empty the cæcum and ascending colon but it tends to retain both directly and indirectly the kidney in its normal relationship. It also serves to displace the sigmoid flexure upwards and facilitates the evacuation of its contents. In savage life the postures are infinitely more varied; the recumbent and squatting attitudes are habitually assumed the latter being rendered impossible by the exigencies of civilisation. In India and elsewhere the squatting posture is employed during micturition. In a large proportion of these cases of constipation the kidneys are mobile; indeed in many of the cases I have operated on for chronic constipation one or both kidneys had been previously fixed by the operation of nephrorrhaphy. The kidneys are rendered more or less mobile by two factors. One is the strain exerted upon them by the ascending colon and cæcum or by the transverse colon at the splenic flexure, and as the drag exerted on the right kidney is much greater than that experienced by the left one the mobility of the former organ is correspondingly greater.

The second factor in determining and facilitating the displacement of the kidneys is the *absorption of fat*, which I shall show later to be a direct consequence of the auto intoxication produced by the intestinal obstruction.

We will now consider the clinical symptoms which are associated with the mechanical conditions I have described. In the first instance, I think we may assume that the earliest factor in the determination of the delayed functioning of the gastro-intestinal tract is what is commonly called

ndigestion or the altered condition of the intestines which esults from improper feeding This by diminishing the eneral energy and the respiratory capacity assists in educing progressively the ability of the several portions of he body to perform their normal functions and so impairs till further the manner in which the drainage apparatus of the human animal performs its work Indeed, *indigestion* n one form or another may be regarded as a frequent con omitant of delayed and obstructed drainage whilst that ondition exists The frequent distension of the cæcum, ascending colon, transverse colon, and subsequently of the small intestines produces a feeling of illness, inactivity, nausea, vomiting, flatulence or pain which are in part due o the local distension determining a reflex upset of the whole tract and partly to the toxic influence exerted by the ptomaines absorbed by the mucous membrane The patient experiences considerable discomfort, tenderness or pain over the cæcum and ascending colon This may extend lownwards and inwards over the middle line into the true pelvis Associated with this pain there are pain and tenderness below the last rib on the right side and often along the distribution of the ilio inguinal and ocal pain in the loin with the , both of which simulate very e kidney, has very frequently ted surgeons to explore the right kidney Finding nothing to account for the pain the surgeon has been disappointed but frequently the patient has for a time been relieved This amelioration of symptoms the surgeon has easily explained on the principle that an operation on the abdomen though apparently unsuccessful, often does good by morally impressing the patient In this case, as in most others, there is no necessity to draw on one's imagination since the procedure necessary to explore thoroughly the kidney liberates the bands at the hepatic flexure onger or shorter period from of the symptoms The pain o is due partly to the drag exerted upon this area by the adhesions when the patient is in the erect posture and when in the supine posture from the backward thrust of the upper extremity of the distended bowel The same traction exerted upon the last dorsal ilio inguinal and ilio hypogastric nerves accounts for the reflex pain described which simulates renal irritation

A little consideration of the mechanics of the big bowel shows that while the cæcum and ascending colon have great difficulty in passing on their contents in the erect posture their evacuation is very much facilitated by the assumption of the supine position and this may be increased still further if the pelvis is raised by elevating the foot of the bed The easier passage of the fæces from the cesspool in the supine posture probably accounts for the morning evacuation of civilised life The distended cæcum when it fills up the true pelvis produces a dull pain over the sacrum extending from the right sacro iliac joint This pain is much exaggerated during defecation and gives the patient a feeling of an obstacle which he cannot overcome The straining simply drives the large engorged or inflamed cæcum further down wards into the pouch of Douglas and makes matters worse In a large proportion of cases the patient is unable to lie on the left side owing to the drag exerted by the loaded cæcum The transverse colon in some instances produces considerable discomfort or pain Its position can readily be defined by the hand, as it descends to the brim of the true pelvis When the splenic flexure is obstructed the patient complains of a griping pain along the course of the ascending limb of the loop formed by the distended and elongated transverse colon and of a dull aching pain in the left loin about the last two or three ribs This last pain is produced by the drag and the thrust I have just described in the case of the hepatic flexure The fixed and shortened sigmoid flexure is often very tender on pressure and can be readily felt and defined in its abnormal situation Severe pain may be complained of during the passage of fæces through it The abdomen is fuller than it ought to be and a little careful manipulation shows the presence of a quantity of fluid in the small intestine and particularly in the ileum This material accumulates there because of the difficulty offered to its entry into the cæcum The stomach itself is not infrequently dilated This results partly from the process of digestion being prolonged and tedious from the abnormal accumulation of material in the digestive tract and partly from the existence of an excessive amount of gas due to decomposition

The *diminution in respiratory capacity* which is brought about by indigestion in young people is a matter of vital importance and is a very material factor in lowering the activity of all the vital processes in the body In the first instance deficient aeration and oxygenation result from serious alterations in the abdominal mechanics Later a vicious circle is formed, the deficient aeration impairing the digestive processes Very soon after birth in the state of civilisation familiar to us in this country the imperfect nature of the food supplied, which is not often maternal in origin, produces disturbances of the gastro intestinal tract with the consequent imperfect nutrition Now, in infancy indigestion is a very much more serious condition than it is in adult life, indeed, one may safely generalise by saying that the harm done by disturbance of the gastro intestinal tract varies inversely with the age of the child In young life the supply of nutritive material derived from the intestines has not only to meet ordinary wear and tear but an excess has to be obtained from which to form new tissues, and the growth of the child depends largely on the amount of this balance As the process of digestion is vastly more active in infancy the facility with which it is interfered with is correspondingly great and the consequence of such upset is far reaching and disastrous The result of indigestion in the infant is to produce an inflammation and distension of the intestines and irritation and enlargement of the lymphatic glands draining the tract through which material passes, probably in an abnormal state setting up troubles and disturbance in transit Associated with these conditions and in consequence of them a varying quantity of serous fluid is thrown out by the irritated peritoneum This general depreciation of vitality and the formation of a suitable culture medium render the abdomen of young infants a very common seat of tubercle

The presence of toxic materials in the circulation diminishes the resisting power of the tissues to the entry of organisms and makes the sufferer throughout life a more ready victim to tubercle rheumatoid arthritis, gout, gastric ulcer, and other diseases The gums are unable to resist the entry of the organisms which thrive in the decomposing food accumulating in the intervals between the teeth and between the teeth and gums This infection of the gums with the associated destruction of the teeth and inflammation of the lymphatic tissues in and about the mouth and pharynx serves to increase the by pouring foul material into t the air that enters the lungs The odour of the a e from the mouths of these people is often very offensive Their bodies have a peculiar and objectionable smell and this is most marked in the flexures In advanced cases the flesh when incised has a 'graveyard like smell' This is most noticeable in cases of operations on the abdomen when a large area of peritoneum is exposed

The mental depression associated with this form of poisoning is most remarkable the patients being unable to set to work on anything in some cases being so drowsy as to appear to be under the influence of a narcotic They are also liable to attacks of faintness sometimes due to the presence of a large quantity of toxic materials in the circulation and sometimes to pressure on the heart by distended stomach or bowel The loss of control over the temper is also a very marked feature The harm done directly or indirectly by constipation is infinitely greater and more far reaching than that ascribed to alcohol while the misery inflicted on the individual as well as on those brought into constant association with him is often very great indeed While in the large proportion of cases of sluggishly acting gastro intestinal tracts constipation in varying degrees of severity is commonly present, in a certain number the patient obtains a daily evacuation, a surplus being discharged from the over loaded cæcum pool In a smaller proportion of cases diarrhœa may exist either alone the patient having several evacuations in the day, one often following immediately on a meal or there may be alternating periods of constipation and diarrhœa The diarrhœa may be of a very irritating character and much mucus or even mucous casts may be present in the motions

Perhaps the most marked features of this form of poisoning are the *progressive loss of fat* and the *increasing staining of the skin* These two conditions combine especially to produce that appearance of premature age so characteristic of this condition of faulty drainage The rapid loss of fat associated with a corresponding degeneration of the muscles and

other tissues is itself responsible for many other troubles. The viscera of the abdomen are very much affected by this and especially, perhaps, the kidneys. The result of all this is that the viscera lose their support and are in a condition described by a word of comparatively recent coinage—namely, "proptosis." Obstetric disabilities, for which complicated titles have been provided in abundance, are the direct result of the absorption of poisonous products, especially from the cesspool of the intestinal tract. The loss of fat appears sometimes very abruptly as if the tissues of the individual often had continued for a long time to offer a satisfactory resistance to the influence of the poisons and then suddenly gave up the struggle. In other cases the patient becomes gradually thinner. The staining of the skin is partly general and partly local. The whole of the skin may be thin, sticky, and inelastic, and abnormally dark and dirty-looking. This is at first only a transitory feature and disappears with free purgation. Popularly the person is described as being "off colour" or "bilious." I would point out, in passing, that the liver, probably from its bulk, has been blamed for all the trouble produced by the faulty mechanical condition of the intestines, and drugs, usually possessing antiseptic qualities and dignified by the name of "cholagogues," are given with the view of affecting that organ but really act by reducing the poisonous nature of the dammed-up contents of the intestine. I need only refer to mercury as an excellent example of this class. Later the skin becomes permanently dirtier than normal, the tinge varying, however, with the degree of toxicity of the sufferer. Besides this general pigmentation we find areas of exaggerated pigmentation corresponding usually to such surfaces as are exposed to friction or are normally dark. For instance, the skin of the labia and anus, the lower margins of the folds of the axillæ, the skin covering the spines of the lumbar vertebræ especially in women, the neck, the lower eyelid and the area below it, the inner portion of the eyelids, and the prominent parts of the cheek and temple show this pigmentation in a very marked manner. The conjunctivæ are also stained, first temporarily and then permanently, the colour varying in depth, as in the case of the skin. The pigment may be massed in sharply defined areas which may be very conspicuous. These are seen frequently on the cheek and temple, but may occur in any part of the body. The onset of this degeneration of tissues is an evidence that the body has become unable to resist the influence exerted by the poison upon it and unless it be met more or less effectually the changes progress at a rapidly increasing rate.

Another very common concomitant of the alteration in the form and mechanics of the cæcum is an obstruction of the appendix, its normal function being interfered with by its acquired abnormal fixation. I have already indicated in the earlier part of this paper the mechanical relationship of so-called "appendicitis" to overloading of the cesspool or cæcum. As its symptoms are more or less generally known I will not allude further to them. I say more or less generally known, as there is a remarkable tendency to ascribe to the appendix any tenderness present in or about a line which extends from the anterior superior spine of the ilium to the umbilicus and which has been dignified with the name of a distinguished surgeon. Those making this mistake have, however, the satisfaction of knowing that if the appendix is not the cause of the trouble it is freely mobile and its excision involves practically no risk. It can be removed through a very small hole, the comparative minuteness of which gratifies them and the patient, suggesting great operative skill. The operation frees the patient from a possible danger and the surgeon explains its obvious freedom from disease on the supposition that between attacks it may be quite normal. While the patient remains on his back during convalescence the absence of symptoms also suggests success, this opinion being only modified by the subsequent course of events. I am also of opinion that the presence of the distended and inflamed cæcum in the true pelvis interferes with the efficient performance of the functions of the ovaries and Fallopian tubes, in some cases producing matting of the tubes or ovaries or perhaps even determining a cystic degeneration in the latter. The presence of toxic material in large quantity in the blood causes a loss of fat and a want of tone in the muscle of the uterus, &c., interfering with the perfect functioning of the organ and its appendages. It also tends to make the ovaries and breasts undergo a cystic change at an early period. In this way the cæcal obstruction and the necessarily associated conditions I believe, largely responsible for the want of fert some women.

I have only referred indirectly to the attacks of obstruction of varying degrees of completeness and se which may arise from interference with the passage of material from the cæcum into the ascending colon, fro ascending colon into the transverse colon, and fro transverse colon into the descending. A knowledge o mechanics of the changes which ensue in the large int will readily enable the surgeon to diagnose these cond and to differentiate them from trouble in the stomach, kl gall-bladder, appendix, uterus or rectum, to all of structures I have frequently known these conditions buted. In the treatment of such degrees of overload the large bowel as cannot be treated efficiently by mea short of operation I have obtained considerable su by dividing constricting bands and adhesions an subsequent careful attention to the proper functi of the bowel. In a considerable portion of cases means are insufficient as at the best they only a temporary relief since the condition of obstruction r sooner or later. Therefore, when I recognise that mechanics of the intestines have been altered to a de that cannot be rectified satisfactorily by the divisio bands, &c., I divide the ileum at a distance of about fi six inches from the cæcum. This can be done rapidly securely by applying two compression forceps on the i at an interval of about an inch so as to reduce the bul the coats to the minimum possible. As each pair of for is removed an encircling silk ligature is applied. The of bowel intervening between the ligatures is excised the omentum connected with it is ligatured. A purse-st suture is introduced through the peritoneum and mu coat transversely to the long axis of the gut at a suit distance from each ligatured end. Each end is invagin into the bowel and is retained there with perfect safety w the encircling purse-string ligature has been tightened knotted. The sigmoid flexure and rectum are then exam with a view of determining which of the two affords most readily accessible and safe conduit into which the f can be made to drain. In some cases the adhesion of meso-sigmoid and sigmoid flexure is so considerable, the fixation and wasting of this piece of gut are so grea to make it advisable to effect a junction with the di rectum where the muscle wall is hypertrophied and e dealt with. In most cases, however, by carefully separa the adhesions it is possible to bring out between the e of the wound a piece of sigmoid flexure of sufficient le and mobility to effect a perfectly secure and safe junc with the ileum. Having determined on the piece of l bowel which is most suitable for the purpose the prox extremity of the ileum is placed alongside the chosen po and sufficient lengths of each are secured together suitable forceps, gauze packing being placed about. Lo tudinal incisions are made in the approximated piece bowel and by means of a continuous silk suture penetra all the coats the aperture of communication, which shoul of sufficient length, is rendered perfectly secure. To a any possible risk this junction is supplemented by encircling continuous silk suture which does not enter lumen but obtains a secure hold upon the peritoneum muscle coats.

Should the blockage of the bowel be of sufficient sev and duration to have resulted in adhesions of the s intestine it is well to examine it along its length and di such adhesions and bands as effectually as possible. cases of volvulus of the cæcum the mode of treatme precisely the same as that pursued in acute obstruction to an impassable kink at the hepatic flexure or elsewl In this condition I ligature the ileum at a dist of about six inches from the cæcum. On either of the ligature a purse-string suture is introdu The bowel is divided just beyond the ligature and proximal end is rendered secure by the invagination of ligatured end and the tightening up and knotting of proximal purse-string suture. A large rubber tube is pa through the distal segment of the ileum into the cæcum through it the cæcum is first drained and then thorou cleansed with normal saline solution. The tube is rem and the distal portion of the ileum is closed in the u manner. The communication between the ileum and sig flexure or rectum is then established. In certain cumstances it is necessary to consider the advisabilit

tablishing lateral anastomosis between anchored loops of the small bowel liable to obstruction or to divide the ileum higher up than at the place where I usually do connect it

In volvulus of the sigmoid flexure the treatment varies with the conditions present In cases of moderate severity good result can be secured by imitating the process which takes place usually in chronic constipation—namely, the shortening of the meso sigmoid and the fixation of the sigmoid flexure This can be effected by a number of continuous silk sutures attaching the flexure to the peri sigmoid flexure is two modes of treat ent present themselves On two occasions after draining and washing out the bowel I have excised the entire loop and obtained a perfect junction I employed a Murphy's button for this purpose, is owing to the very considerable difference in the size of the two sections of the bowel and their fixations it to the floor of the iliac fossa it was practically impossible to connect them in the usual way by sutures The condition of the patient in both cases rendered the avoidance of any delay of the greatest importance As many of these cases occur in circumstances in which trustworthy assistance is not available a more simple procedure is to drain and to irritate the loop and to establish a large, lateral anastomosis of the loop itself near its base, dividing and closing each limb of the loop beyond the junction, or I have cut through the limb of the loop just beyond the margin of the abdominal wound and have established an end to end anastomosis The treatment must to some extent vary with the conditions present

The operation for chronic constipation of dividing the ileum and establishing continuity with the lower portion of the large bowel appears to be accompanied with no risk in ordinary circumstances If, however, the obstruction be acute and the intestines and abdomen be distended the risks are rather those of the condition calling for interference than of the operation itself Except in advanced cases, in which the small intestines have become adherent to one another and consequently liable to obstruction, this operation affords the patient a partial or complete freedom from all the symptoms which existed previously, its relief varying inversely with the physical changes in the small bowel The only objection to this modification in the nature of the drainage of the tract is that if the patient is careless and does not attend to the daily evacuation of the rectum material may occasionally pass backwards into the caecum and hard masses of fæcal matter may rest there and perhaps cause irritation As a rule these may be readily removed by an enema but if the condition recurs and is troublesome I remove the caecum and ascending colon up to the flexure As by this time the patient has gained flesh and strength this operation, which is a simple one is readily borne with out risk or anxiety The ideal primary operation would be the removal of the large bowel down to the junction with the ileum but against such a measure there is the very unsatisfactory state of these patients which renders them quite unfit to undergo such a severe operation as the removal of nearly the whole of the large bowel without very grave risk to life As a matter of fact the cases which require subsequent excision of the caecum and ascending colon are very rare Exceptionally when the chief obstruction is at the splenic flexure the transverse colon might also be removed advantageously When the system of intestinal drainage has been rendered efficient and the patient has been freed from the toxic materials interfering seriously and progressively with health there is no abnormal risk in such an operation as the removal of the caecum and ascending colon and even also of the transverse colon

I would call your attention most strongly to the extreme importance of operating at a sufficiently early date What I mean is that if you delay interference till the small intestines have been habitually distended with fæcal contents and their walls have become thinned and their muscle much has also become tract has got into the dilatory and inefficient manner, you will obtain only a partial amount of benefit from the operation It would seem that unlike voluntary muscle once the involuntary muscle fibre of the intestine has become overstrained by the pressure exerted upon it over a long period of time by the intestinal contents recovery is very slow and very imperfect

BENIGN VILLOUS TUMOUR OF THE RENAL PELVIS, HÆMOTHORAX, NEPHRECTOMY, RECOVERY

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A MAN aged 38 years had always enjoyed excellent health and had led an outdoor life partly in New Zealand and partly in East Anglia, in both of which districts calculous diseases are very common For the four years previously to coming under observation (1899–1903) he had been subject to attacks of what he called colic, for which he had to seek medical advice on several occasions In 1901 he first noticed blood in his urine and this continued at intervals for two years This bleeding occasionally occurred without pain, sometimes it was accompanied by pain in the urethra and lower abdomen, sometimes by retention of urine, and generally by backache He could express no definite opinion as to which side was most painful The bleeding and pain appeared to be aggravated by exertion but there were numerous occasions on which the patient retired to bed feeling well and having passed quite clear urine awakened [illegible] large quantity of blood in his [illegible] might have suggested tumour [illegible] During 1903 these attacks of pain and haemorrhage had become very frequent occurring sometimes with as long an interval as ten days often with much less interval and lasting several days at a time

On Sept 22nd 1903 he was seized with severe left renal colic and he passed what sounded like and appeared to be a stone but unfortunately he did not keep it He then came under the observation of one of us There was a large quantity of blood in the urine and distinct tenderness and rigidity in the left loin and down the left ureter, but the right loin seemed quite free from pain and tenderness and there were no other signs of disease except some anæmia It was then agreed that as soon as he could make arrangements he should go into a nursing home and have his left kidney explored for stone He continued to pass large quantities of bloody urine but on Oct 2nd he went out shooting in a very much inclosed country necessitating a large amount of jumping over hedges and ditches At night he felt faint and had severe pain in the right loin this being the first occasion on which the pain had been definitely felt on that side In spite of this he was out walking for several hours next day but returned home in agony He became blanched and breathless vomited continuously, and remained collapsed and almost pulseless The urine contained clots and had the appearance of almost pure blood His condition became so serious and his blood vessels so empty that saline injections were required to keep his circulation going

There was great pain and tenderness over the right loin with some swelling which gave the impression of a blocked kidney but owing to the great thickness of the abdominal parietes neither kidney could be definitely felt Under the influence of rest and ergot the hæmorrhage subsided but the temperature tended to rise, giving the idea of a ruptured kidney and as he was living a long way from surgical aid it became necessary to move him This was done on Oct 9th and in carrying him downstairs he received a blow on his right loin which was followed by some faintness, but whether this blow was the cause of the subsequent complications is doubtful He bore a journey of 100 miles fairly well and after resting in bed some days his urine gradually became clear, no villous fragments could be discovered in the urine, but there was a large number of epithelial cells of various sizes and shapes similar to those found in all cases of irritation of the renal pelvis There were some oxalate of lime crystals

On Oct 18th he was still extremely anæmic and it was noticed that he had developed some dyspnœa which led to the discovery of a right pleural effusion On the 20th 30

VILLOUS TUMOURS OF RENAL PELVIS.

No.	Physician or Surgeon.	Sex.	Age.	Reference.	Nature of growth.	Remarks.
1	De Morgan.	F.	76	Transactions of the Pathological Society, vol. xxi., p. 239.	Benign papilloma.	Disease had existed for years.
2	Murchison.	M.	65	Transactions of the Pathological Society, vol. xxi., p. 241: figured in Bland-Sutton's Tumours, p. 225, fig. 133.	" "	Hæmaturia 14 months. Growth in both pelves and at both ureteric orifices in bladder. Patient died from uræmia.
3	Pearce Gould.	F.	65	Middlesex Hospital Reports, 1897, p. 131. Specimen Middlesex Hospital Museum.	" "	Nephrectomy.
4	Kellock.	M.	27	Middlesex Hospital Reports, 1897, p. 131.	" "	"
5	Henry Morris.	M.	—	H. Morris's Surgical Diseases of Kidney and Ureter, vol. ii., p. 9.	Carcinoma with villous tufts.	Seven months' continuous hæmorrhage; nephrectomy death.
6	Drew.	M.	56	Transactions of the Pathological Society, vol. xlviii., p. 130.	Villous carcinoma.	Hydronephrosis; nephrotomy; removal of tumour; subsequent nephrectomy.
7	Billroth.	M.	33	Wiener Medicinische Wochenschrift, 1884, No. 25, 774.	Benign papilloma.	Nephrectomy; recovery.
8	T. Jones (Manchester).	M.	55	Practitioner, 1892, vol. ii., p. 131.	Carcinoma.	Hæmaturia 18 months; nephrotomy; growth removed with finger and spoon; recovery; subsequent nephrectomy.
9	Battle.	M.	51	Transactions of the Pathological Society, vol. xlix., p. 178; also Brit. Med. Jour., 1895, p. 1206.	Simple papilloma with calculus.	Nephrolithotomy; scraping; nephrectomy.
10	Knowsley Thornton.	F.	32	Annals of Surgery, 1885, vol. ii., p. 424. Medical Times and Gazette, 1885, p. 348. Specimen in the Museum of the Royal College of Surgeons of England.	Simple benign papilloma with calculus.	Hydronephrosis; nephrectomy.
11	Bright.	—	—	Specimen in Guy's Hospital Museum, No. 1652.	Carcinoma.	Fistulous opening between colon and interior of kidney.
12	—	—	—	Specimen in University College Museum, No. 1888.	Papillary growths.	Smooth calculus distended the calyces, forming a series of sacs, in four of which were small papillary growths.
13	Barker.	M.	56	Specimen in University College Museum, No. 1922.	Villous carcinoma with simple papilloma.	Villous carcinoma in dilated calyces. Simple papillomatous tumours in bladder and ureter.
14	Bradford.	M.	44	Transactions of the Pathological Society, 1898, vol. xlix., p. 171. Specimen in University College Museum, No. 1914.	Benign papilloma.	Patient died from delirium tremens. Post-mortem examination revealed kidney distended with blood clot in centre of which was a calculus. The upper end of ureter and renal pelvis were lined with papillary growth.
15	Reginald Harrison.	—	—	Reginald Harrison's Surgical Disorders of Urinary Organs, p. 204, fourth edition.	Papilloma.	Villous tumour of bladder. After death pelvis of one kidney was found full of villous growth.
16	J. Pantaloni.	—	—	Archives Provinciales de Chirurgie, Paris, 1899, vol. viii., pp. 1–44.	Le papillome du bassinet.	Nephrectomy; recurrence.
17	P. Tikhoff.	—	—	Archives Provinciales de Chirurgie, Paris, 1901, vol. x., pp. 143–48. A specimen in King's College Museum.	Un cas de papillome du bassinet. Villous papilloma with melanotic sarcoma.	—
18	Hurry Fenwick.	M.	72	Hurry Fenwick's Ureteric Meatoscopy in Obscure Diseases of Kidney, figs. 20 and 21, p. 81. Also Transactions of the Medical Society of London, vol. xx., p. 228. Specimen A. 3584, in the Museum of the Royal College of Surgeons of England.	Villous carcinoma.	After two years' hæmaturia exploration of kidney with negative results. Two years subsequently nephrectomy by Mr. Fenwick. One year later removal of ureter for recurrence. Death five years after nephrectomy.
19	"	M.	30	Ureteric Meatoscopy, p. 85, fig. 23.	Villous papilloma.	Nephrectomy after one year of hæmaturia; cured. Well five years later.
20	"	M.	40	Ureteric Meatoscopy, p. 86, fig. 24.	Villous carcinoma.	Nephrectomy; recurrence. Death six months later.
21	"	M.	59	Ureteric Meatoscopy, p. 89.	Papilliferous carcinoma.	Nephrectomy. Death six years later from cancer of liver.
22	Hoche and Damange.	M.	—	Les Lésions du Rein, L. Hoche.	Benign papilloma.	Patient passed fragments of villous growth by urethra and as symptoms subsided no surgical interference was needed.
23	E. Owen.	M.	1½	St. Mary's Hospital Museum, 1196 A.	Reported as mixed carcinoma and sarcoma.	Nephrectomy. Large tumour kidney with spaces in which were papillary growths.

VILLOUS TUMOURS OF RENAL PELVIS—*(Continued)*.

No.	Physician or Surgeon.	Sex.	Age.	Reference.	Nature of growth.	Remarks.
24	Heaton and Gamgee.	M.	48	THE LANCET, Sept. 13th, 1902, p. 746.	Benign papilloma.	kidney substance had quite disappeared. Histor[illegible] hæmaturia. In 1883 the left kidney was explored with negative results. In 1884 [illegible]clots; no light on source of hæmor[illegible], nothing found. In 1888 the left [illegible] examined with cystoscope, negative [illegible] cure.
25	Savory and Nash.	M.	38	Specimen in the Museum of the Royal College of Surgeons of England.	Villous papilloma.	Rupture into pleura; nephrectomy; recovery.
26	B. Poll.	M.	41	Brun's Beitrage, 1899, p 822.	Villous epithelioma.	Nephrectomy.
27	Tourpet and Gueniot.	F.	89	Bulletin de la Société Anatomique de Paris, 1893, p. 678	"	—
28	Jena.	M.	—	Centralblatt fur allgemeine Pathologie und Pathologische Anatomie, 1894, p. 659	"	—
29	Voelcker.	M.	68	Transactions of the Pathological Society, vol. xlvi, p 133	Villous carcinoma.	Post mortem.
30	Albarran.	M.	64	Thèse d'Heresco, Paris, 1899, p 84.	Villous epithelioma.	Nephrectomy.
31	Reynès.	M.		Proceedings of the International Congress, 1900 Section of Urinary Surgery, p. 77.	Papilloma: recurred as carcinoma.	"
32	Grohé.	F.	37	Deutsche Zeitschrift für Chirurgie, 1901, vol. lx, p. 1.	Adeno-carcinoma.	Transperitoneal nephrectomy; death eight months afterwards.
33	"	F.	60	" "	"	Nephrectomy.
34	Albarran.	M.	45	Tumeur du Rein, Albarran, No 34, p 699.	Cylindrical epithelioma.	Nephrectomy; recurred in six months.
35	Israel.	M.	52	Chirurgie Klinische der Nierenkrankheiten, 1901, p 533.	Villous epithelioma.	Nephrectomy; recurrence one year after.
36	"	M.	64	" "	"	—
37	Reynolds, Harry B.	M.	66	Annals of Surgery, May, 1904.	Papilloma.	Papilloma; size of tomato; hydronephrosis containing 14 pints; nephrectomy; death.
38	Rayer.	—	—	Atlas, plate vi, fig 4.	"	—
39	Lebert.	—	—	Anatomie Pathologique, 1861, vol i, p. 269	"	—
40	Lancereaux.	M.	64	Dict., Dechambre, vol iii, p 247	"	
41	Neelsen.	M.	57	Ziegler's Beitrage, 1888, p 279	"	
42	Kohlhardt.	F.	69	Virchow's Archiv, 1897, p 565.	"	—
43	Kauffmann.	M.	Young.	Lehrbuch der Speciellen Pathologischen Anatomie, 1896, p 627.	"	
44	Jebens.	M.	42	Thèse de Strasbourg, 1894, Obs. vii.	"	
45	Le Dentu and Albarran.	M.	33	Bulletin de l'Académie de Medecine, 1899, p. 240	"	Nephrectomy and ureterectomy.
46	Ricard.	F.	45	Quoted by Albarran.	"	—
47	Heresco.	M.	32	Annales Génito Urinaires, June, 1901.	Papillomatous adenoma.	
48	Albarran.	F.	35	Société de Chirurgie, July, 1902.	"	
49	Rayer.	M.	38	Traité, vol. iii., p 699, 1841.	Papillomatous epithelioma.	

ounces of very deeply blood-stained fluid were aspirated from his right pleura and on the 25th two ounces of almost pure blood. This fluid did not smell of urine and unfortunately it was not tested for urea. A blood examination gave negative results. Gradually the effusion cleared up and on Nov. 8th an exploratory operation was performed on the right kidney by the lumbar method. The kidney was very much enlarged, extending upwards to the diaphragm and downwards to the iliac fossa. It measured from nine to ten inches from above downwards. Near its upper end a soft spot was found and when this was accidentally opened masses of blood clot, both old and recent, extruded. Several handfuls of this were removed and some villous-like growth was found in it which suggested malignant disease. It was evidently necessary to remove the kidney and this was done. There was great difficulty in separating it from the diaphragm, to which it was firmly adherent, and it was obvious that there had been a perforation through the diaphragm into the pleura, which, however, did not appear patent at the operation. The operation was a very difficult one owing to the very great muscular development of the patient and the size of the kidney and its adhesions. A huge cavity was left after its removal, but this closed rapidly and the patient quickly recovered. There was no stone found at the operation.

The urine passed on the first seven days after the operation amounted to 19, 27, 42, 32, 57, 53, and 43 ounces and it soon became quite clear and normal in character. A week after the operation he had an attack of left renal colic and passed a small calculus which the nurse unfortunately lost. Since then the patient has remained quite well; he has gained a good deal of weight and is able to ride and to shoot and feels better than he has done for years. Over 12 months have now elapsed since the operation.

The kidney (Fig. 1) is [illegible] of the Royal College of Surgeons shows the size it was *in situ*; much [illegible] blood clot which filled the upper dilated calyces was lost at the operation, the ureter is partly occupied by growth and has probably been [illegible] clot. The kidney substa[illegible] the upper portion but some [illegible] ins below.

The microscopical section (*vide infra*) shows a simple villous papilloma (Fig. 2).

As to the diagnosis, papilloma of the renal pelvis is so extremely rare that it is not surprising there was considerable difficulty in correctly diagnosing this case. The first

FIG. 1.

of us who saw the case suggested stone in the left kidney, then stone in the right kidney, then he thought a stone had ruptured the kidney, and when hæmothorax developed he still clung to the diagnosis of a calculus which had ruptured the kidney and penetrated the diaphragm. His colleague considered that it was a calculus but thought the hæmothorax was due to traumatism not necessarily affecting the kidney. Finally, the operation discovered a tumour which we thought might be malignant but which the microscope showed to be benign papilloma. Anyone who reads this case will agree that there was a considerable amount of evidence in favour of every one of the above diagnoses.

The actual history of passing calculi obscured the real cause of the hæmaturia but the point we have emphasised—viz., passage of blood during rest in bed—was hardly like hæmaturia from calculus and should have suggested the correct solution. When the hæmothorax developed we questioned whether tubercle or malignant growth was the cause of this, but the appearance of the patient was against either, though his family history suggested both. His mother had died from carcinoma of the kidney, two brothers from pulmonary tuberculosis, and a sister from tuberculous meningitis, and with very few exceptions all his relatives who did not die from tubercle died from cancer.

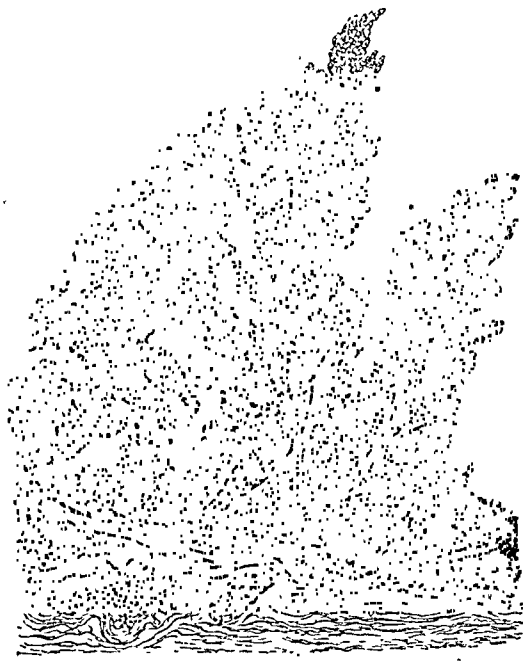
S. Paget, in his "Surgery of the Chest," p. 198, says: "A hæmorrhagic effusion into the pleura is almost certainly a sign either of tubercular or malignant disease of the lung or pleura at whatever age it occurs"; and p. 199: "A hæmorrhagic effusion may occur in cases of abdominal tumour and is almost certain proof that the abdominal disease is malignant and has invaded the diaphragm."

Osler,[1] in addition to tuberculous and cancerous pleurisy, states: "Occasionally hæmorrhagic exudation into the pleura is met with in perfectly healthy individuals." He also mentions Bright's disease, malignant fevers, and cirrhosis of the liver as causes. Hæmothorax and hæmaturia have been reported in combination by Oliver,[2] but we are unable to find any case of hæmonephrosis which perforated into the pleura; in Bright's case there was a fistulous opening into the colon.

1 Osler: Principles and Practice of Medicine, p. 674.
2 Brit. Med. Jour., March, 1892, p. 647.

We have visited or made inquiries at the museums of the medical schools in London and from these sources the literature on the subject we have collected some 49 of villous tumours of the renal pelvis. The works of Morris, H. Fenwick, Albarran, and Imbert have the majority of them, but they have not been together in English literature so far as we can tain. The subjoined list speaks for itself; partic it emphasises the rarity of these tumours in the femal It will also be seen that the diagnosis of these presented difficulties even to the leading surgeons physicians of the day. Mr. Fenwick's patient had under many well-known surgeons and physicians diagnosed oxalate of lime stones in one or other kidn growth of kidney, villous growth of the bladder,

FIG. 2.



so on. One surgeon cut down on his right kidney but declined to open it. The patient then for two years went the round of the profession in London and Edinburgh till Mr. Fenwick removed his kidney and cured his hæmaturia. In the case described by Heaton and Gamgee the patient was in various hospitals in Birmingham and under the most careful observation, but it took nine and a half years and five major operations, to say nothing of cystoscopy, before the diagnosis and cure were completed. Our patient certainly presented unique complications and baffled exact diagnosis but his treatment has been correct and now that more than 12 months have elapsed since his operation we can say that he has recovered and that there is a fair hope that he is cured.

Bedford.

ETHYL CHLORIDE AS AN ANÆSTHETIC IN GENERAL PRACTICE.[1]

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HAVING often been asked by general practitioners my opinion of the suitability of ethyl chloride as a general anæsthetic I think a few remarks on this subject may not be devoid of interest. There may be but little new to say and you may feel that what I do tell you is in the nature of a "back number." You are all doubtless as familiar with what has been written upon this subject as I am and I shall therefore have to rely on my own practice

1 A[illegible] the Winchester Division of the British Medical Association [illegible], 1904.

experience of ethyl chloride. This experience is considerable, for since the summer of 1903 I have used it constantly at the London Hospital in a large number of cases at the Royal Dental Hospital, and also in private practice. I have given it to every variety of case and in every variety of way, to old men and maidens, young men and children, infants, and aged women. I have given it alone and with air, with nitrous oxide, with chloroform, with ether, and with A.C.E. mixture, and as a preliminary to each of the last three for a large variety of surgical operations.

As my remarks will be of an essentially practical nature I will not enlarge upon the history of the drug; ethyl chloride is not new, indeed it is quite old, at any rate old enough to have been practically forgotten until Dr. W. J. McCardie of Birmingham nearly four years ago reminded us of its anæsthetic properties and showed us how, with the purest ethyl chloride procurable, it might in skilled hands be a most valuable addition to our armamentarium; since then Dr. McCardie has done most valuable work on the subject, work which has already become classical and work for which all anæsthetists and, I think I may say, the public too, owe him a debt of gratitude. [illegible] chloride we may almost ignore, [illegible] ve have little time to devote to th[illegible] but the history in this case has one important practical point for us —viz., it impresses upon us the fact that even in skilled hands death under ethyl chloride has occurred suddenly and unexpectedly. I make this point because with much familiarity one becomes so charmed with the action of ethyl chloride as an anæsthetic that one may easily underestimate its lethal power.

Ethyl chloride (C_2H_5Cl) is a colourless, very mobile liquid, is very volatile, boiling at 12·5° C. or 55° F. It has a pleasant smell and on inhaling a breath or two a pleasant feeling of exhilaration is experienced.

What are the capabilities of ethyl chloride in general practice? Before deciding this point we must learn what the requirements of the general practitioner are for an anæsthetic, and I hope further light will be thrown on the point in the discussion. I suppose I may take it that to satisfy him the agent must be portable, of stable composition, safe, easy of administration, not requiring elaborate preparation beforehand, rapidly acting, and providing if necessary a narcosis of several minutes after removal of the inhaler—a narcosis which shall be quiet and sleeplike and which shall not necessitate close watching after a safe dose has been administered; an agent giving an anæsthesia which shall not be followed by dangerous or unpleasant after-effects. Ethyl chloride fulfils most of these conditions, provided it is administered with care and discrimination and provided that the administrator is a keen observer and quick to notice the finest shades [illegible] dition. Ethyl chloride is [illegible] bottle containing enough [illegible] which is but seven inches [illegible] diameter. Its composition, if properly stoppered and kept cool and in the dark, is practically stable; I am now using some ethyl chloride I bought several months ago. It is relatively safe; that is, there have been few recorded deaths in many thousand administrations, but its action is so extra- [illegible] that unless [illegible] those cases [illegible]

It may be well to quote here a case which occurred to me a few months ago, and which was most instructive to me—a case which has inspired me with the greatest awe for the power of ethyl chloride. The patient was a youth, aged 18 years. The operation was for the radical cure of hernia. He seemed rather frail but otherwise he was normal in every respect. I decided to demonstrate to my clinical clerks the induction of ether anæsthesia preceded by ethyl chloride. The usual precautions were taken and after [illegible] rug acts I began the [illegible] s when he began to struggle, but owing to the short lapse of time since I had applied the face-piece these struggles were considered voluntary, that in fact the patient was objecting to the taste and smell of the anæsthetic, and as the eyelids were tightly closed I held on; but a moment later the struggles became more clonic and opisthotonos developed—to one of experience there was no mistaking this sign. The inhaler was at once removed and the pupils were examined. I never saw pupils more dilated, the corneal reflex was absent and the iris did not respond to the stimulus of light. Had I not been a witness of this case I would not have believed that any drug could possibly act so rapidly—the whole thing occurred inside 20 seconds I am sure, and the experience has been one of my most valuable. Before leaving this case I may say a word about the early condition of the lids; they were tightly closed, and as every anæsthetist knows the tonicity of the eyelids is a valuable index of the condition of the other ocular reflexes —that is to say, if there be a good "tone" in the lid muscle one may take it that the other reflexes are present, but if the lids be flaccid it is probable that the other less delicate reflexes are abolished also. Taking into account this contraction of the lids (they did not "give" to the finger) with the short time since the inhaler was applied the true condition, viz., that the orbicularis palpebrarum was involved in the general muscular convulsion, was mistaken for unabolished lid reflex. One, of course, never judges from one piece of evidence only, and in this case I reviewed the evidence of (1) the time during which the administration had lasted and the dose given; (2) the condition of the eyelids; (3) the respiration (it was not, as is usual, characteristic of the condition of the patient); and (4) the evidence of my past experience. The result shows that even with so much evidence a judgment may be unjust and impresses on us the point that we must, in administering anæsthetics, never rely on one piece of evidence only, but take for our guide the patient's whole condition in its several factors and not the condition of only one reflex or other sign. This case was so unusual that had I been a novice in the administration of anæsthetics I fear I should have lost him. But this is digression.

One full dose of ethyl chloride provides an available anæsthesia of at least two minutes, an anæsthesia which if complete muscular flaccidity is not required is, I think, ideal, and after which unpleasant occurrences are not common if proper precautions are taken. But if, on the other hand, complete muscular flaccidity is required the anæsthetic must be pushed to the limit of safety, and although one gets a longer anæsthesia bad after-effects are more likely to follow. I have said so much in favour of ethyl chloride that a wrong impression will be created unless I now point out its limitations; they are, that it is unsuitable for long operations because not only does it produce anæsthesia rapidly but it is also very rapidly eliminated, consequently it is very difficult to maintain a proper even depth of anæsthesia and unless this is attained an undue strain is thrown upon the automatic vital centres. If it were used for long operations the cost would be considerable, and it would require the undivided attention of a skilled and expert administrator so that, at any rate, one man could not administer the anæsthetic and operate at the same time, which is often necessary in general practice in the country. Not only this, but the after-effects vary in direct proportion to the length of the administration, and after large doses faintness or more serious cardiac depression are likely to be met with.

We now come to the administration itself and I will tell you what I find is the best practice.

1. *The inhaler.*—So many new inhalers have recently been placed upon the market, each claiming to be the best, that it is difficult for the uninitiated to decide on which to purchase. After using a variety of inhalers I recommend above all others Carter Braine's modification of Ormsby's inhaler, which I will now show you. My reasons are that if you give ether at all it is probably this inhaler you already have—if not I think it ought to be. One does not want to multiply one's apparatus any more than can be avoided and with the inhaler referred to any anæsthetic could be given. The intrinsic advantages of the inhaler are that its air way is so wide that there is absolutely no obstruction to respiration if you insert your sponge properly—and a great deal is involved in this. The following points are worth remembering. (1) character of sponge: it should be of the honeycomb variety; (2) it should be unbleached, because when wet it does not lose its rigidity or elasticity—it is true that the bleached sponges look prettier but directly they are wetted with anæsthetic fluids they collapse and there is great difficulty in breathing through them; (3) it should be cut so that the channels run parallel with the long axis of the inhaler and the patient then respires through a series of tubes bathed in the anæsthetic fluid; (4) it should not fit the inhaler tightly

so as to compress its channels; (5) it should be well wrung out in warm water before use so that all its cells fully expand; and (6) it should be so placed in the inhaler that all the foregoing points have full play. Some have objected that if one uses the Ormsby one "crowds on" the anæsthetic too much, but please note that I have not suggested that one should put the full dose *on the sponge* and clap the inhaler on the face suddenly; this would, of course, be bad practice and those who raise such an objection are lacking in imagination and show a want of resource in the use of apparatus. The proper way to use ethyl chloride in an Ormsby is to apply the anæsthetic not *on* the sponge but *beyond* it; in this way the vapour is screened from the face by the sponge and does not come over too suddenly, it does not freeze solid as is usually the case if merely sprayed on the surface of the sponge where it evaporates very quickly. Then do not *clap* on the inhaler but apply it gently to the bridge of the patient's nose at an angle away from the face and with the air valve open, then gradually shorten this angle and when the inhaler properly fits gradually close the air valve. The face-piece meanwhile should be supported and closely applied by the aid of the little finger of the hand holding it being placed under the chin. Experience will soon teach you how rapidly these manipulations may be carried out; suffice it to say that one can so anæsthetise a child that it will neither hold its breath, cough, nor struggle from beginning to end of the administration and yet one will not have lost by evaporation so much of the anæsthetic as to require a second dose. Of course, if the drug is too suddenly applied any patient may cough or struggle, the struggles being usually struggles for air and not mere struggles from excitement as many students seem to think, for the breath is taken away by the pungency of too strong a vapour.

2. *Preparation of the patient.*—This naturally need not be as elaborate for an operation in minor surgery as for one in major surgery, but do not be misled by statements to the effect that *no* preparation is required; merchants of ethyl chloride or its mixtures, particularly the latter, attempt to make capital in this way; if the stomach, bladder, or bowels be full at the time of the administration they are very likely to empty themselves reflexly either during or immediately after the administration.

3. *Posture.*—Almost any posture is safe, so far as the anæsthetic is concerned, but remember that small children are best anæsthetised in the recumbent position—they are apt to collapse into a heap in the chair if the administration is conducted therein. Also remember that children prefer to sit while being anæsthetised—they are less frightened than if laid down; one can always let them sit for the first few breaths and as soon as the higher consciousness is lost lay them down. Remember, moreover, that the pain of fear is worse than any physical pain and that the less a patient is, from youth, amenable to reason the more is he susceptible to fear, therefore deal tenderly with the little ones. But if you do place a patient in a chair place him so that there is no obstruction to respiration and no fear of the respiration becoming obstructed during the administration; that is, he should be made to sit erect with the head erect on the spine, so that the floor of the mouth is horizontal, for if the head be thrown back, in the favourite position with dentists and barbers, the neck muscles are put on the stretch and the trachea becomes pressed upon in consequence and there is a risk of the respiration becoming obstructed. Not only this but any saliva, blood, or other fluids gravitate backwards and are either swallowed or inhaled, in the former case giving rise to subsequent vomiting and in the latter to laryngeal spasm. If, on the other hand, the head be tilted forwards the chin is apt to press unduly upon the trachea and cause respiratory embarrassment in this way; in either case serious cyanosis, &c., will result and with the head thrown back "false stertor" is heard early in the anæsthesia, before the patient is fully anæsthetised, which may lead you to misjudge the depth of anæsthesia and stop the administration too soon.

4. *Dose.*—This depends upon what operative procedure you wish to do and upon the weight and fitness of your patient. Always dose according to weight—I mean that a big, heavy person will require more, other things being equal, than a small thin one; allow more for alcoholics and smokers and those who are intemperate in anything and allow less for the anæmic or breathless person. A good average dose for an average adult is 5 cubic centimetres; but, of course, the dose will vary with the degree of dilution and if the face-piece does not fit accurately there will be considerable admixture of air and he may require a further dose, or you may be unable to obtain a satisfactory anæsthesia at all. It is better to give a full dose and rapidly induce, allowing no admixture of air beyond that which is already in the inhaler, than to economise your drug and make up for smallness of dose by prolonged re-breathing.

5. *After-effects.*—These vary in direct ratio to the amount of re-breathing to and fro allowed; also on the amount of previous preparation and to some extent the dose—after large doses or prolonged administration during which much re-breathing has been allowed shock and faintness are likely to be met with. Another important point is the after-treatment; for instance, if a patient be moved too soon he is more likely to suffer from vomiting and headache, but if he be allowed to remain in the recumbent posture for a quarter of an hour or more after the administration he is less likely to have after-effects. My average at hospital among all classes of patients is that about 3 in 12 have after-effects; many of these, however, come to hospital soon after a meal and otherwise unprepared. In private practice vomiting is quite uncommon.

6. *Clinical signs.*—Provided that the administration is conducted in the way I have described—that is to say, that no outside air is admitted to the inhaler after the air valve has been closed—the following signs are observed: 1. Breathing deepens and becomes more rapid—this alteration in the character of the breathing affords a most valuable guide as to the degree of anæsthesia attained and results, I think, not so much from the action of the ethyl chloride *per se* as to the restriction of oxygen, the oxygen originally in the inhaler being soon used up, with consequent stimulation of the respiratory centre. 2. A little later one feels by the finger under the patient's chin some vibratory movements of the larynx and a moment later still these vibrations become more and more audible, until (3) the characteristic laryngeal stertor is observed. At this point the administration should be stopped—i.e., if the stertor be *true* tracheal stertor and not due to faulty posture causing obstructive or "*false*" stertor. 4. About the same time that the breathing deepens the patient's colour improves and the face becomes suffused and he looks a pretty, healthy, pink colour. There is some controversy as to whether the blood pressure is raised or depressed during the induction of anæsthesia. I incline to a middle opinion—viz., that at first, owing to the increased force and frequency of the pulse which is observed in nearly all cases, the pressure tends to rise but almost at the same time there is some vaso-motor paralysis in the cutaneous vessels; these accordingly dilate to a considerable extent and thus the pressure is equalised or even tends later in the course of the administration to fall. But this dilatation which causes the suffusion of the face also causes perspiration in many cases and in others, again, considerable bleeding from the wound, especially after the removal of adenoids and tonsils, particularly if the anæsthesia has been pushed and the vaso-motor paralysis thus increased. I do not think it matters much in actual practice whether the pressure rises or falls, for in the event of any accident happening one has no time to waste over examining the pulse. It has been established that ethyl chloride kills, not by paralysing the heart, but by paralysing the respiration, the chest becoming fixed in over-expansion; thus, in restoring a patient who has been over-dosed nitrite of amyl, for instance, would be useless. 5. About the same time, or a little earlier than that at which the first tracheal stertor has been noticed and a little later than that at which the face becomes suffused—usually from 40 to 50 seconds—the globes of the eyes become fixed, often after some preliminary nystagmus and usually in the position of convergent squint downwards. 6. A moment or two later the pupils dilate and if the anæsthetic be not now removed (7) the light and the corneal reflexes disappear, the pupils becoming very dilated and fixed. If air be now admitted and the anæsthesia be lightened or continued in a lighter stage the pupils again contract, but I have seen in several cases, even after the corneal reflex has returned, the pupil remain wide and insensitive; I do not know how to account for this, any more than I can explain why in yet a few other cases the pupil does not dilate, even although the patient be deeply anæsthetised. These irregular cases only again impress upon us the necessity for considering all the points of available evidence before making up our minds as to a patient's condition. To repeat, although in about 90 per cent. of cases the signs of deep anæsthesia are stertor, fixity

of the globes, and dilated pupils with loss of ocular reflexes, yet these signs must not be taken as invariable and one must always be on the watch for unusual symptoms As a rule there is but little salivation during induction, but often one meets with profuse secretion of saliva for no obvious reason—this is a point worth remembering in arranging the patient s position It is never wise to push the anæsthetic in the case of fat subjects they bear deprivation of oxygen badly and are more likely to suffer from shock, also their respiratory passages are as encroached upon by fat overgrowth on the inside as are the skin and cutaneous tissues, and the air ways are more likely to become occluded Never administer ethyl chloride without first placing a wooden dental prop between the teeth—this not only keeps the air way free but is also a safeguard in case one may have to insert a Mason's gag to expedite means of resuscitation

Some anæsthetists have stated that ethyl chloride is unsuitable for certain special operations—e g , for breaking down joints and for setting fractures, &c —because they say they cannot obtain complete muscular flaccidity, but I think that is merely a question of degree of anæsthesia and that if the anæsthetic be administered with a free admixture of air and is pushed to fixity of the globes, dilatation and fixity of the pupils, with loss of corneal reflex and with stertorous breathing, there will be complete muscular flaccidity in the vast majority of cases

With regard to contra indications, in the following conditions ethyl chloride should not be administered diseases of the larynx, inflammatory lesions and tumours in or adjacent to, the respiratory pas ages, goitre all conditions giving rise to urgent dyspnœa, and in long operations Time will not permit of my mentioning other points—e g , treatment of dangerous symptoms, &c , its use with other anæsthetics and for long and for special operations, especially tonsils and adenoids, except to remind you that in these last the risk is increased if the coughing reflex be abolished and that under ethyl chloride this occurs very rapidly.

Wilton place W

ACUTE LYMPHOCYTHÆMIA [1]

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SUPERINTENDENT OF THE CLINICAL LABORATORY AND DEMONSTRATOR OF CLINICAL PATHOLOGY, ST THOMAS'S HOSPITAL GILLSON RESEARCH SCHOLAR IN PATHOLOGY TO THE SOCIETY OF APOTHECARIES, FRASNUS WILSON LECTURER ROYAL COLLEGE OF SURGEONS OF ENGLAND

THE case which I bring before this society to night is of great pathological interest and serves to illustrate some very important problems associated with this disease and also with severe anæmias in general The history of the case is as follows A man, aged 37 years, was admitted into St Thomas's Hospital, under the care of Dr H G Furney, on August 29th, 1904 The patient's father and mother were said to be suffering from syphilis at the time of his birth There is nothing else of interest in either the family or past history The present illness appears to date from the beginning of July of this year The patient was having his holidays and he noticed that he was unable to go about and enjoy himself as he wished to do, because he was so easily fatigued His friends noticed that he was becoming anæmic In the early part of August he was compelled to take to his bed owing to increasing weakness and severe persistent headache On August 27th he came to St Thomas's Hospital for treatment as he wished to leave for South Africa as soon as it was possible

On admission to the hospital the patient was found to be intensely anæmic and in a very weak condition The state of his mouth was extremely bad There were a large number of stumps in both the upper and lower jaws and a quantity of offensive pus oozed up from around the fangs The gums showed a great tendency to bleed and were pale and spongy Large and tender glands could be felt in the submaxillary triangle and around the lower jaw On examination of the chest there was some evidence of emphysema, otherwise the lungs were found to be normal The heart was found to be normal to inspection, palpation, and percussion, but a soft systolic murmur could be heard at the apex and at the left base The murmur was quite localised at both these situations The radial pulse was 100, regular, and of fair tension. The vessel wall was thickened The spleen was found to descend about one and a half inches below the left costal margin and this viscus also extended upwards for some distance above the normal limits There was no friction rub heard The spleen was of very firm consistence. There was a considerable increase of the area of liver dulness The lower edge could be felt about the level of the umbilicus The surface was smooth and the free edge was hard There was nothing else abnormal in the abdomen There was no evidence of ascites There were no true glandular enlargements in the lymphatic system beyond what has already been referred to as a result of the septic condition of the patient's mouth The nervous system did not present any abnormal features The optic discs were found to be normal and there was nothing abnormal detected on examination of the retinæ The conjunctivæ were extremely pallid There was no tenderness of any of the bones There were no abnormal changes in the skin The urine was acid and was of specific gravity 1025, no albumin or sugar was found

Examination of the blood —The red cells were counted by a modification of Gowers s method, and the leucocytes by the Strong Seligmann method The hæmoglobin was estimated by Solly's modification of Oliver s hæmoglobinometer The blood films were stained by Leishman's method The results of the examination of the blood, on three separate occasions, are given below in a tabulated form It is impossible to over estimate the importance of a complete examination of the blood in all blood diseases It is frequently stated in the literature that the lymphocytes, for example, were 52 per cent Such a record is of no value *A differential count* of leucocytes and the total number of each variety of leucocyte in a cubic millimetre of blood should always be given, otherwise the results which are obtained are of no scientific value

Table showing the Results of the Examination of the Blood on Three Separate Occasions

—	First examination August 31st 1904	Second examination Sept 7th 1904	Third examination, Sept 14th, 1904
Erythrocytes	2,102 000 per c mm	1 665 000 per c mm	0,956 000 per c mm
Leucocytes	43 980 per c mm	73 200 per c mm	449 800 per c mm
Hæmoglobin	40·0 per cent	25 0 per cent	15 0 per cent
Colour index	0 9	0 8	0 7 (nearly)
Approximate ratio between leucocytes and erythrocytes	1 48	1 23	1 2

Stained Blood

—	1 per cent	Per 1000 cells	Per cubic millimetre	1 per cent	Per 500 cells	Per cubic millimetre.	Per cent.	Per 500 cells	Per cubic millimetre.
Polymorphonuclear neutrophiles	2	21	924	1 6	8	1 171	0 4	2	1 799
Small lymphocytes	62 7	627	27,588	46 2	231	33 818	9·0	45	40 482
Large lymphocytes	34 0	340	14 960	48 8	244	36 721	23 6	118	37,032
Large hyaline cells	0 4	4	176	3·0	15	2,196	6 8	34	30 586
Mast cells	0 0	0	0	0·0	0	0	0·0	0	0
Eosinophiles	0 8	8	352	0 4	2	292	0 2	1	379
Total mononuclear cells	97 1	971	42,724	98 0	490	71 735	99 4	497	447 100

Fresh blood and blood films were examined with the following results On August 31st rouleaux formation (Hayem s method) was good There was slight poikilocytosis present A few microcytes but no macrocytes were

seen. There were no nucleated red cells present and no degenerative changes in the red cells. Many of the leucocytes had ragged edges and some showed a small ring in the centre of the nucleus. On Sept. 7th rouleaux formation was present. There was slight poikilocytosis. Fibrin formation was very well shown. The appearances of the red cells were found to be almost identical with those obtained at the first examination. On Sept. 14th there was no true rouleaux formation present. There was still only slight poikilocytosis. There were a few macrocytes and microcytes present, but no nucleated red cells or degenerative changes in the red cells were seen. Some of the mononuclear cells were very large and a certain proportion of these cells contained a few small basophilic granules. The blood films were carefully examined and some 2000 cells were counted, but only three definite neutrophilic myelocytes were seen.

Agglutination of the erythrocytes.—I wish to draw attention to a very important phenomenon which has been found to occur in the blood in cases of very severe anæmia. If a patient's ear is punctured and the blood is normal a definite red drop appears at the seat of the puncture. If, however, the patient has only 1,000,000 or less red blood corpuscles, as in the present case, the appearance of the drop is quite different. We see a drop of blood-stained serum in which are suspended numerous minute red granules. If blood-film preparations are made it is found that it is impossible to separate the red corpuscles as in health, because the cells are massed together in little clumps. Again, if the fresh blood is examined it is found that there is absence of true rouleaux formation, but the red blood corpuscles are seen to be in little clumps. Identical results are obtained if a hanging-drop preparation is made. The red blood corpuscles are therefore agglutinated in cases of *very severe* anæmia and this phenomenon will be found to occur in the large majority of cases. It has long been known that if we add physiological salt solution to normal blood the rouleaux formation is much less marked than normal. Mr. S. G. Shattock has shown that if horse serum is added to human blood the rouleaux formation is much more marked than normal. I have observed in cases of polycythæmia that the rouleaux formation is always much more extensive than in normal blood.

Klein has shown that if we wish to make a suspension of plague bacilli for serum reactions we must use physiological salt solution for the purpose, or else agglutination will be found to have occurred in the control culture. Douglas has recently shown that a 0·1 per cent. salt solution is more suitable for the preparation of a suspension of plague bacilli than the stronger solution. Crendiropoulo and Miss Amos have also shown that certain salts in certain dilutions inhibit the agglutination of micro-organisms. They found that a 1 per cent. solution of potassium chloride favours agglutination, whereas a 0·1 per cent. solution of the same salt prevents agglutination of the cholera vibrios. It is therefore evident from the above facts that various salts have an important bearing on the production of rouleaux formation and of agglutination of micro-organisms. Physiological salt solution can be shown to have a similar bearing on the agglutination of red blood corpuscles. If the blood which has been obtained from cases of severe anæmia and in which agglutination of the red blood corpuscles is known to occur is mixed with a drop of salt solution the red blood corpuscles will be found to lie quite isolated, just as takes place when plague bacilli are mixed with salt solution. It is possible that the agglutination of the erythrocytes which occurs in severe anæmia may be due to some alteration in the chemical constitution of the plasma but at present there is not any direct proof either for or against such a theory. It is also probable that this agglutination of the red cells which has been shown to occur in the blood as it escapes from a small puncture of the skin, and which is therefore probably present in the blood stream, may be the cause of capillary thrombosis. This complication in severe anæmia has been known to occur for some time past but no satisfactory explanation has been offered. The idea that it is due to an agglutination of the red blood corpuscles in the capillaries is, as I have shown, a most likely explanation.

Bacteriology of the blood.—20 cubic centimetres of blood were withdrawn from the basilic vein of the right arm and mixed with hot agar at the temperature of 44° C. The mixed blood and agar were poured into three large Petri dishes and incubated at 37° C. On each plate small white colonies were obtained of the staphylococcus albus.

Notes while the patient was in the hospital.—I will only give the most important notes which have a direct bearing on the pathology of the disease. As regards the temperature, there was pyrexia of an irregular remittent type during the whole period of the patient's illness while under observation in the hospital. There was never any very high temperature recorded. There were never any subcutaneous hæmorrhages or petechiæ seen. The condition of the mouth gradually became worse and on several occasions the patient had a severe hæmorrhage from the gums. Two hæmorrhages were seen for the first time four days before he died, in the right disc and retina and one or two dark spots which might have been due to capillary thrombosis. There was never any true glandular enlargement. The urine remained normal during the entire course of the illness. There was never any diarrhœa or vomiting. The bones were never tender.

Necropsy.—At the post-mortem examination (which was performed by Dr. E. A. Gates) the body was found to be well nourished and the subcutaneous fat was of a bright yellow colour. The mouth was in a septic condition and enlarged glands were found in the submaxillary triangle. There was no enlargement of the tonsils or of the papillæ of the tongue. The thymus gland was atrophied. There were no enlarged mediastinal or bronchial glands. There were no pleural adhesions but a small amount of slightly blood-stained fluid was present in each pleural sac. The lungs were very œdematous but contained air throughout their entire substance. The right lung weighed 34 ounces and the left lung 24½ ounces. The heart weighed 13½ ounces. The valves were competent and healthy. The heart muscle was soft and very pale. Numerous punctiform hæmorrhages were seen beneath the endocardium of the right auricle. The clot in the cardiac chambers and in the large blood-vessels was of a pale pink colour. The aorta was healthy. The spleen weighed 23½ ounces. There was some evidence of old perisplenitis. The cut surface was pale and soft. There were no nodular enlargements visible to the naked eye. There was no enlargement of the mesenteric glands. Extending downwards all along the vertebral column from the level of the cœliac axis there were a very large number of large red, soft, and succulent glands. The liver was found to weigh 71½ ounces. The surface was very irregular and the capsule was thickened. There were no nodules visible to the naked eye. Dr. C. R. Box suggested that the liver should be examined for the free iron reaction. An intense blue reaction was obtained. The pancreas and adrenals appeared to be normal. The kidneys were found to weigh 14½ ounces; both organs were enlarged and of about the same size. The capsule of the right kidney was adherent, the surface was pale, the cortex was narrowed, and there were numerous small cysts on the surface beneath the capsule. The left kidney was of a purple colour and the cortex was swollen. The capsule was adherent but less so than in the case of the opposite kidney and there were no cysts visible on the surface. We could not detect any nodules either on the surface or in the substance of either kidney. The intestines from the duodenum to the rectum were normal. There was no enlargement of the lymphoid tissue. Numerous hæmorrhages were seen beneath the mucosa of the stomach. Enormous numbers of minute capillary hæmorrhages were visible on the surface of all the viscera and in the adipose and connective tissue throughout the body; in fact, the skin appeared to be the only portion of the body which was exempt. The brain appeared to be normal to the naked eye. An ossified plate about half an inch by three-quarters of an inch was found in the falx cerebri. We took pieces of several ribs and also a portion of the right femur. The rib marrow was very soft and not over abundant. It resembled thin, pale, reddish-yellow pus. The femur was in a condition of chronic osteitis. The medullary cavity was obliterated and the outer surface of the bone was rough and irregular. A small quantity of bright yellow fat was obtained with difficulty from the centre of the femur owing to the spicules of bone which filled up the central canal.

Microscopical histology.—The main bulk of the femur marrow was adipose tissue but in places there were large masses of closely packed cells. No free iron reaction was obtained. Sections were stained by Leishman's method, with the following result. There were numerous small, darkly stained nucleated cells present but the large proportion of the cells had a large pale nucleus which almost completely filled them. Only a very few of the cells showed an indentation of the nucleus. We failed to demonstrate any neutrophilic

granules in any of these cells No eosinophiles or mast cells were found in any of the sections Only a few nucleated red blood corpuscles were seen In the rib marrow the cells were much more closely packed together than is found in healthy marrow No giant cells were seen, although a very large number of sections were examined, in fact, we did not observe any small multinucleated cells Only a slight reaction for free iron was obtained The sections of the rib marrow, which were stained by Leishman's method, appeared to have an almost identical structure with the femur marrow A few normoblasts but no megaloblasts were seen in the various sections A differential count of the marrow cells was made The total number of cells which were counted was 500 The result was as follows —

Small mononuclear cells	144	28 8 per cent
Large mononuclear cells	354	70 8 "
Large hyaline cells	2	0 4 "
	500	100·0

Eight normoblasts were seen while counting 500 white cells

The sections of the hæmolymph glands which were stained with Leishman's stain were found (with a $\frac{1}{12}$th oil immersion lens) to be very similar to the structure of the rib and femur bone marrow and to the spleen We noticed with a low power objective that the blood sinuses were packed full of cells which with a high power were similar to those already described in the bone marrow although in a different proportion These cells were also found in large numbers in the capsule of the gland and in the connective tissue stroma which extended into the gland substance Only a slight reaction for free iron was obtained A differential count was made of the cells found in the hæmolymph glands and the result was as follows —

Small mononuclear cells	269	53 8 per cent
Large mononuclear cells	223	45 6 "
Large hyaline cells	3	0 6 "
	500	100 0

One normoblast was seen

In a lymphatic gland from the groin the gland tissue was largely replaced by fat These areas of fat were simply bounded by small mononuclear cells Lymphocytes were present in large numbers in the capsule of the gland and in the connective tissue septa There was no endothelial cell proliferation to be seen throughout the gland The small lymphocyte was found to be the chief type of cell present, but there were also present cells which resembled the large mononuclears which we have described as the predominant type in the bone marrow Film preparations were made from scrapings of the surface of the spleen and were stained by Leishman's method The large majority of cells present were similar to the large type of bone marrow cell in which I was unable to demonstrate neutrophilic granules No parasites were seen There was no evidence of fat in the sections stained by Busch's method There was only a very small amount of free iron present in sections of the spleen No Malpighian bodies could be identified in any of the sections The capsule of the spleen was thickened and coarse fibrous bands passed in all directions throughout the splenic tissue The lumen of the blood vessels in the capsule and in the fibrous bands was almost entirely filled with lymphocytes No multinucleated cells of any kind were seen There was a large amount of fat present in the liver It was a most

certain amount of fibrous overgrowth The hepatic cells were very much degenerated and in places were unrecognisable The whole organ was riddled with round cell infiltration [2] The type of cell which we met with in the various viscera appeared to be identical in its morphological and staining properties with the large mononucleated cell already referred to There was a large amount of fat present in the tubules of the kidneys and a few droplets of fat could be seen in most of the glomeruli The round cell infiltration was very extensive in both kidneys There was some thickening of the capsule of the right kidney The kidney tissue proper was largely replaced by fibrous tissue. Both kidneys showed changes which were characteristic of chronic interstitial nephritis but the right kidney more so than the left The lymphocytic infiltration was most marked in both kidneys, it affected all the structures but perhaps more especially the renal tissue proper The alveolar walls of the lungs were infiltrated with lymphocytes and the capillaries were entirely filled with these cells, otherwise the lung tissue appeared to be normal. The capillaries beneath the epicardium and also those throughout the heart muscle were packed with lymphocytes There were also large patches of these cells was no increase of s were degenerated npletely lost and in or completely lost

The round cell infiltration of the heart muscle was very clearly shown between the individual cells No microorganisms were seen in any of the microscopical sections of the various viscera

Chemical analysis of the liver —A specimen of the liver was sent to Dr H R Le Sueur, consulting chemist to the hospital, who issued the following report "The total weight of liver received amounted to 127 5 grammes The inorganic residue measured 1 9 per cent and the amount of iron was found to be 0 17 per cent" If we refer to Dr W Hunter's work on "Pernicious Anæmia" we find recorded an analysis of the liver in various diseases The chief results are given below in a tabulated form —

Pernicious Anæmia

Number of cases	Author	Result (average)
4	Hopkins	0 453 per cent of iron
6	Hunter	0 332 "
2	Stockman	0 185 "
Total average for the 12 cases		0 325 per cent.

Leukæmia [3]

1	Hunter	0 140 per cent. of iron
1	Stockman	0 337 " "
Average for the two cases, 0 238 per cent.		

Ankylostomiasis

5	Stockman	0·030 per cent of iron
5	Rake	0 125 " "
Average for ten cases, 0·077 per cent		

Professor R Stockman found, on an analysis of four healthy livers, 0 080 per cent of iron It is therefore obvious that there was considerable hæmolysis in our case Professor Stockman found from an analysis of two cases of pernicious anæmia slightly more iron than Dr Le Sueur found in our case, but there was much more iron present than in the recorded cases of ankylostomiasis The two cases of leukæmia which are referred to in this paper showed much more evidence of hæmolysis than was found in our case Dr Hunter says "The nearest approach to the average in pernicious anæmia is made in leukæmia and malaria—i e, conditions which present clinically no difficulties in regard to diagnosis from pernicious anæmia

Most observers will agree that acute lymphocythæmia is a disease in which the bone marrow is now known to play a very important part, just as occurs in cases of myelæmia The hæmolymph glands also appear to have a very important share in the pathology of this obscure disease It is impossible to over estimate the importance of a careful and complete examination of all the viscera including the bone marrow and glands in this disease Our case shows the importance of this statement when we consider the difference which existed between a naked eye and a microscopical examination of the femur marrow It would be preferable for the term lymphatic leukæmia' to be replaced by either acute leukæmia —i e, using the term 'leukæmia' in its very widest sense—or still better—"acute lymphæmia' or 'lymphocythæmia" To describe lymphocythæmia as lymphatic leukæmia is as incorrect as to describe myelæmia as splenic leukæmia

It has been suggested by various observers that acute lymphocythæmia is really acute myelæmia, that is to say, the cells which form such a characteristic feature of the blood are really myelocytes, not lymphocytes

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[2] Dr Hunter unfortunately does not state from which variety of leukæmia these salts were obtained.

a theory which was introduced by Askanazy. Let us carefully compare the changes which are found in the blood in myelæmia and acute lymphocythæmia. The number of red and white cells in each disease is of little importance in the question under discussion. If we examine the blood of a patient suffering from myelæmia we find that there are certain changes in the red and white cells which are absolutely diagnostic of the disease. There is no known disease of adult life in which we find such enormous numbers of nucleated red blood corpuscles as in myelæmia. If the patient who is the subject of this disease suffers at any time from a hæmorrhage from the gums, or elsewhere, we shall find that the number of normoblasts, megaloblasts, and microblasts is extremely large, especially the number of normoblasts. Polychromatophilic degeneration is usually well marked in such cases but granular degeneration is not. Numerous macrocytes[4] and microcytes and well-marked poikilocytosis are usually present. Now, if the case is an example of acute lymphocythæmia we shall find an absolutely different picture. Nucleated red blood corpuscles in this disease are either extremely few or completely absent, even after severe hæmorrhages, as our case so well illustrates. Polychromatophilic and granular degeneration are either slight or more frequently absent. It might be supposed that the number of nucleated red blood corpuscles was due to the fact that myelæmia is usually a chronic disease. Such a view would, however, be erroneous. Hermon Gordinier has recently reported a case of acute myelæmia in the *Johns Hopkins Hospital Bulletin* in which the patient only lived four months from the commencement of the illness. The author stated that normoblasts were common in the blood in his case, but that "an occasional megaloblast was present, perhaps one to every second or third field. No count of the nucleated red cells was made." This statement, however, requires modifying. If one megaloblast was present in every second or third field a very large number of such cells would be seen during a differential count of 500 or 1000 leucocytes, when we consider that the patient had 260,000 leucocytes per cubic millimetre of blood. An extremely valuable case of acute myelæmia has been recorded by Billings and Capps. The patient's illness in this case began in August, 1899, but Dr. Richard Cabot who examined the blood found it to be normal. On Sept. 20th the patient was much worse and had 2160 nucleated red cells in a cubic millimetre of blood, most of which were normoblasts. On Oct. 7th there were 2618 nucleated red cells in a cubic millimetre of blood. If we now examine the white cells in leukæmia we are brought face to face with some very important facts. If numerous mast cells are found in a specimen of blood it is justifiable to diagnose myelæmia. In normal blood we rarely find more than two mast cells while counting 500 leucocytes, but if from 5 to 10 per cent are found in the blood it is practically certain that the patient from whom the specimen of blood was obtained is suffering from myelæmia. In one case of myelæmia I found 17 per cent. of these cells in the blood. In lymphæmia, however, this type of cell is only present in the blood in very small numbers and is never increased, but also in many of the recorded cases of acute myelæmia there has not been any increase, or only very slight increase, of the number of mast cells.

In the literature the term "myelocyte" is used in a very wide sense. There are numerous varieties of myelocytes and to classify all forms under one head is not only incorrect but most misleading. If the blood in myelæmia is carefully examined at least four varieties of myelocytes (neutrophilic, eosinophilic, basophilic, and amphophilic) will be found in every case. Those observers who consider that acute lymphocythæmia is really acute myelæmia—i.e., that the apparent lymphocytes are really myelocytes—appear to forget this fact. They use the term myelocyte as if every myelocyte was neutrophilic. They even go further and classify myelocytes as mononucleated cells, frequently non-granular. This is indeed a bold assumption, although it is not usually considered as such. We all know that in chronic myelæmia there are a certain proportion of mononucleated cells which are usually very large non-granular cells and are often classified as myelocytes. These cells consist of a pale degenerated nucleus which is surrounded by a narrow rim of cytoplasm but even here we are not absolutely justified in our conclusion. In acute leukæmia (lymphocythæmic type), however, the large majority of cells have a definite blue nucleus (eosin-methylene blue stain) surrounded by a rim of basophilic cytoplasm and would be described as lymphocytes but for the unfortunate fact that they are present in enormous numbers. It is unjustifiable to my mind to describe these cells as non-granular myelocytes. If this was a purely clinical question it would not matter whether these cells were called myelocytes or lymphocytes, but it is a matter of very great pathological importance and therefore should be treated as such. In acute lymphæmia definite neutrophilic myelocytes are found in very small numbers and also the large cells which resemble the large mononuclear cells such as are found in the blood in myelæmia, but the great majority of the cells are identical to the lymphocytes of normal blood except that a good many of the large lymphocytes have ragged edges and also a few granules which appear to be basophilic. These granules are usually demonstrated in the cells in those cases in which a Romanowsky stain has been used. It is well known that the basophilic granules which are found in the red cells in certain diseases are only to be seen in those cases in which some sample of this stain has been used. It also shows up the basophilic granules in the lymphocytes in normal blood and in the various anæmias, which otherwise would never have been demonstrated. Much more valuable results would be obtained in the future if greater care was given to the recognition of a myelocyte. Many of the so-called polymorphonuclear neutrophiles which are present in children's blood and the large majority in the blood of kittens and puppies are really polynuclear cells without any neutrophilic granules, but the nucleus of these cells is diagnostic. There is nothing, however, diagnostic about the nucleus of a neutrophilic myelocyte, although in many of the neutrophilic myelocytes (large type) which are only found in chronic myelæmia the nucleus is quite unlike anything which we see in normal blood or in any disease apart from leukæmia. The granules of a neutrophilic myelocyte, of course, are similar to the granules which are present in polynuclear neutrophiles. If, however, those observers are correct who consider that the large lymphocytes which are found in the blood in acute lymphocythæmia are non-granular myelocytes, then we have a condition of the blood which is unique—viz., almost the entire cells atypical myelocytes without neutrophilic granules. In the recorded cases of acute myelæmia eosinophilic myelocytes have been present in every case, sometimes in large numbers. In Gordinier's case which has already been quoted 4·1 per cent. of these cells were found in the blood. It is impossible to demonstrate basophilic granules with Ehrlich's stain and, therefore, in the recorded cases in which this was the only stain employed this type of cell would be overlooked.

In the recorded cases of acute myelæmia polynuclear neutrophiles and eosinophiles have been considerably reduced in relative proportion but greatly increased in absolute numbers. In the other variety of acute leukæmia we have an entirely different picture. The lymphocytes amount to 80, 90, and even 99 per cent. of the total number of white cells, of which the large majority are usually large lymphocytes (myelocytes of some observers), but the polynuclear neutrophiles, eosinophiles, and mast cells are reduced relatively to a minimum and absolutely below the normal. Eosinophilic, basophilic, and amphophilic myelocytes are rarely met with. When the bone marrow is examined in cases of acute myelæmia it is said that it consists almost entirely of myelocytes and to a less extent of nucleated red blood corpuscles, eosinophiles, eosinophilic myelocytes, and large mononuclear cells. In acute lymphocythæmia a few normoblasts are found but the large majority of the cells are large and small mononuclear cells which do not contain any granules. A case of acute leukæmia has recently been reported before the Pathological Society of London by Dr. F. Parkes Weber in which the blood was *not* examined during life. A specimen of the blood was obtained at the necropsy and was examined by Dr. G. L. Eastes who found that the cells were chiefly non-granular lymphocytes, but 3·6 per cent. of eosinophilic myelocytes were also found. The bone marrow which was obtained from the shaft of the femur was of a creamy blood red colour but not diffluent. It was examined by Professor Robert Muir who found large numbers of eosinophiles and mononuclear cells and also in the spleen and bone marrow cells which had the characters of eosinophilic myelocytes. Professor Muir remarks: "I have never seen eosinophil cells in such numbers in the tissues in lymphatic leukæmia, yet the

[4] The most perfect macrocytes are found in the blood in cases of anæmia of the pernicious type.

case appears to be of that nature." It is most unfortunate that the blood was not examined during life in this case, as it appears from the result of the microscopical examination of the tissues that the case was atypical and also that it is the only recorded case in which so many eosinophilic cells were found in the blood. Leube has lately drawn attention to a disease to which he has given the name of leukanæmia. It is a disease which has some of the characteristic features of pernicious anæmia and some of leukæmia. It has been suggested that some cases of lymphæmia and myelæmia are of this class. In such cases the red cells show changes similar to those which are found in so-called pernicious anæmia but there has been a leucocytosis (lymphocytic or myelocytic) and leukæmic infiltration of the viscera. I do not think, however, in our case that such a diagnosis could possibly be made. In conclusion, I consider that acute lymphocythæmia is a disease with definite hæmatological characters and with certain changes in the various viscera by which it can be diagnosed from acute myelæmia.

My best thanks are due to Dr. Turney for giving me permission to make use of the entire pathological material derived from this case.

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H. Gordinier: Report of a Case o [illegible] No. 163

TWO CASES OF SEVERE CRANIAL INJURY.

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THE two following cases present points of interest. Case 1, the apparently more severe one—viz., compound comminuted fracture of the skull—ended in complete recovery within an exceptionally short period; while Case 2, an apparently slight injury, resulted in death within three hours. In both cases there was an absence of subjective symptoms, for neither owned to any particular pain or distress, though the first presented a shocking distortion and laceration of the face, including exposure of the dura mater and escape of cerebro-spinal fluid.

CASE 1.—A man, aged 27 years, descended a steep hill on his bicycle at great speed. At the bottom he ran into a wall built at a right angle to the direction in which he was travelling. His head struck one of the large blue slate stones of which the wall was built, splitting it in two. He was conveyed to the surgery a mile distant, where he sat and answered questions while his injuries were attended to. There was a compound comminuted fracture immediately below the right frontal eminence extending into the frontal sinus and passing backwards to an unknown extent. The [illegible] by three [illegible] and cerebro-spinal fluid was escaping freely. Six quite loose fragments of bone were removed and one sharp spicule of a larger fragment which pressed on the dura mater was clipped off; other fractured portions were allowed to remain. Besides this injury the nasal bones were crushed in, the right zygoma was fractured, and there was a compound fracture of the left superior maxilla. The lower lip was completely torn through in the middle line and the mucous membrane was reflected off the alveolar portion of the lower jaw as far back as the right first molar tooth. A wound on the upper surface of the tongue nearly divided it through on the left side.

During the first three days a large quantity of cerebro-spinal fluid was lost; this gradually diminished until it ceased to escape at the end of the second week. The patient made an uninterrupted and rapid recovery. He was out of doors ten days after the accident and was perfectly well at the end of three weeks.

CASE 2.—The patient, a married woman, aged 37 years, in mounting her bicycle caught her dress in the pedal, overbalanced, and fell on her left side. Her head came in contact with the ground, breaking her hair comb and causing a superficial abrasion which bled for about three minutes. On being joined by her husband within one minute of the occurrence of the accident she was perfectly conscious and standing up. She said she was not much hurt and would ride her bicycle back to the village, but ultimately decided to walk. This she did, a distance of two and a half miles, and appeared to be chiefly concerned about her machine. On arriving at the house she walked upstairs, undressed, and lay down. Then, two hours after the accident, she first complained of deep-seated pain in her head. As her friends thought she was "faint" brandy was given and medical aid was called. When first seen, two and a quarter hours after the accident, the patient was very drowsy and unable to answer questions. There was a small hæmatoma of the scalp over the left parietal bone. The left pupil was slightly larger than the right. The head was at once shaved preparatory to trephining for the left middle meningeal artery. Pupil changes rapidly supervened and complete loss of consciousness with stertorous breathing followed. Unfortunately the patient died before the instruments arrived. A post-mortem examination was not obtained but death was caused by compression of the brain by blood, probably from a ruptured left middle meningeal artery due to fracture of the left parietal bone.

Windermere.

A CASE OF CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS IN THE ADULT.

BY A. ERNEST MAYLARD, M.B., B.S. LOND.,
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With Full Report of the Post-mortem Examination by JOHN ANDERSON, M.B., C.M. Glasg., *Pathologist to the Infirmary.*

IN December, 1903, I read a paper before the Clinical Society of London entitled "Congenital Narrowness of the Pyloric Orifice" and narrated the histories of half a dozen cases which I believed to be illustrative of such a condition. In none of these cases was there any hypertrophy of the pyloric ring but solely an abnormal development of the pyloric valve whereby the latter was broadened and the orifice correspondingly narrowed. The present case, however, is a type of that more commonly met with in its advanced stage in early life and only resembling the other form in the lateness with which the symptoms of obstruction manifest themselves. The case which I am about to report resembles in a very striking way the form of stenosis previously described by Professor Rudolf Maier of Freiburg. I will, however, narrate the history of the case before passing further remarks upon it.

A man, aged 31 years, was admitted into the medical side of the Victoria Infirmary on March 12th, 1903, under the care of Dr. Ebenezer Duncan, in whose charge he remained until the 23rd, when he was transferred to the surgical side. His illness commenced about three years previously with a feeling of heaviness and oppression over the sternum coming on shortly after taking food. In the course of a month or so he began to suffer from water brash and gradually the feeling of oppression changed into distinct pain. During the earlier part of his illness he vomited after food with immediate relief of his pain. Four days would often elapse without any vomiting. Seven months previously his symptoms increased in severity. The pain occurred regularly after every meal and in the course of about half an hour was followed by vomiting with relief of the pain. So long as he took milk and fluid diet his suffering was slight. His appetite was always good at the earlier stages of his illness but latterly it had become less so. In addition to the pain felt after food he was nearly always conscious of a burning

acrid sensation in the epigastrium. He stated that within seven months he had lost about two stones in weight.

On admission into the infirmary he was seen to be distinctly emaciated. His tongue was covered with dirty yellowish-brown fur, the teeth were carious, but the breath was not noticeably foul. There was no enlargement of the liver. Slight epigastric tenderness was present. There was no succussion. The urine was acid, of specific gravity 1028, and contained no albumin. He stated that he had never vomited blood or, so far as he knew, ever passed blood per rectum. Neither did it appear that he had ever been jaundiced. He had been moderate both as a smoker and as a consumer of alcohol. A test breakfast was given; no free hydrochloric acid or lactic acid was detected. The stomach was inflated and was seen to extend down to the umbilicus and over towards the right. The air could be heard rushing through the pylorus.

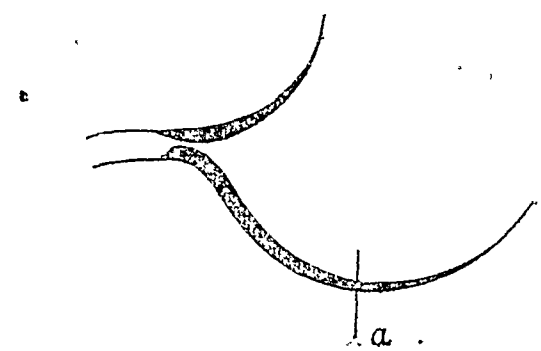
On March 26th posterior gastro-jejunostomy was performed. Prior to opening the stomach a digital examination proved the absence of any adhesions. The duodenum was perfectly normal but at the pylorus there was uniform thickening which extended away to the left, apparently passing insidiously into the body of the stomach. Beyond this uniform enlargement nothing else could be detected. The opening into the stomach was close to the greater curvature and from three to four inches from the pylorus. The gastric parietes appeared to be about five millimetres thick and a piece was excised for microscopical examination. A digital examination of the interior of the stomach revealed a smooth lining of mucous membrane with a tight, uniform ring-like constriction at the pylorus. The patient made an uninterrupted recovery. Dr. Anderson reported that the piece of tissue sent for examination contained no malignant elements and consisted entirely of hypertrophied muscular wall.

On Feb. 20th, 1904, the patient was readmitted under the care of my colleague Dr. Duncan, to whom I am indebted for the remaining notes of the case until his decease on Oct. 11th. At this time he was complaining greatly of thirst and for more than a month he had been trying to quench it by drinking quantities of soda-water and sour milk. He had been gradually losing flesh, although there had been no return of his earlier gastric symptoms and he had been able to eat solid food. His skin was very dry and on examination of the abdomen there was no evidence of succussion or any abdominal tenderness. He was passing large quantities of urine which was neutral in reaction and of specific gravity 1012. There was no albumin. Sugar was found but in small amount, five cubic centimetres of urine being required to reduce five cubic centimetres of Fehling. His chief complaint was headache and feeling of weakness. He remained under treatment for about three weeks, when he was dismissed much improved.

On Sept. 16th he was again admitted under Dr. Duncan complaining of increasing weakness and general pains all over his body, and although not troubled with his stomach his appetite had failed and he was taking very little nourishment. His urine was slightly alkaline and of specific gravity 1021. There were no albumin and no sugar. He gradually got into a mentally lethargic condition with no otherwise marked symptoms and died from increasing exhaustion on Oct. 11th.

Report of the post-mortem examination by DR. ANDERSON.—The body was well developed but very emaciated. Rigor mortis was pronounced. The pupils were equal and of medium size. There were a healed gastro-jejunostomy wound in the upper segment of the abdomen and an eczematous condition of both ears. The pericardium was healthy. The heart, which weighed 6¾ ounces, was small and atrophied in appearance. The muscular tissue was of fairly firm consistence but of a dull brown colour. The chambers were small in size and their walls were thin. All the valves were healthy. The lungs were adherent to the chest wall by a few fibrous bands on the posterior surface, by a firm adhesion at the right apex, and over an area of thickened pleura at the left base. On section, both lungs showed a moderate degree of passive congestion; the free edges were emphysematous and in the apex of the right lung there was a healed tuberculous lesion. At the base of the left lung there was an area of thickening of the visceral pleura which measured two inches in diameter and was one-sixteenth of an inch thick. A microscopic examination showed it to be of a tuberculous nature. The scar in the abdominal wall was that of a well-healed wound. The stomach was small in size and contracted and presented healthy appearances of its serous and muscular coats, but the mucosa showed evidence of a chronic gastric catarrh with slight excess of mucus on its surface. The pylorus was stenosed and rigid, the aperture being sufficient to admit a No. 10 catheter, and when cut through it showed a hypertrophied condition of the pyloric ridge. The gastro-jejunostomy opening was fully patent and allowed of the insertion of the thumb, while the position of parts was fully satisfactory. The small intestine was thin-walled and when opened it showed no obvious lesion apart from the general atrophy. There was no distension. The large intestine presented normal appearances but the wall was likewise thin. The liver was of small size, dark in colour, but of normal consistence. At the lower edge of the right lobe there was a marked thickening of the capsule not unlike that of a healed gumma. This area of thickening was about three inches in diameter and other two areas of the size of a hazel nut were also seen on the anterior surface of the organ. The gall-bladder contained about one ounce of dark-coloured bile; its walls were healthy. The spleen was of normal size; there were one or two adhesions to the diaphragm and the capsule in places was thickened. On section the organ showed an increase in the fibrous stroma and was of a dark purple colour. The kidneys were of normal size and congested. Their capsules were non-adherent. On section a slight diminution in the area of the cortex with induration was noted. The bladder was healthy. The pancreas was rather smaller than the normal size, slightly congested, and flattened from before backwards. The lobules were large in size and the organ was of dense consistence. There was an absence of fat around the gland. Wirsung's duct was traced into the duodenum where it entered along with the common bile duct at the papilla major, but no evidence of the accessory duct was found.

Microscopic examination of the organs.—The lesion at the right apex was of the nature of a fibroid phthisis. The thickening of the pleura at the left base was from a chronic tuberculous pleurisy. The sections of the liver showed a slight increase of fibrous tissue in the portal areas, passive congestion, and yellow pigmentation of the hepatic cells. The thickened capsule was composed of well-formed fibrous tissue and fibrous strands extended from it into the substance of the liver. The sections of the kidneys and the spleen showed a condition of chronic fibrosis. The sections of the pancreas showed an increase of fibrous stroma throughout the gland in the periphery of the lobules and especially well marked around the ducts, the walls of which appeared to be thickened. The islands of Langerhans were well represented and showed no special features. The glandular parenchyma was fairly healthy. The vessels were congested. The sections of the pylorus showed an atrophic appearance of the mucous membrane. The submucous coat was not hypertrophied. The muscular coat was well developed and hypertrophied, with areas of new formation of fibrous tissue between the muscular bundles. There were no evidence of healed ulceration and no malignancy. Sections of several parts of the stomach wall were also prepared and showed



the results of a chronic gastritis. The mucous coat was atrophied with loss of glandular structure, the submucous coat was increased in thickness with fibrous tissue formation, and there was a slight fibrous tissue increase in the intermuscular layers with no obvious increase in thickness of the muscular coat. The small intestine was examined at various parts, but the conditions found were those of a general atrophy.

—A reference to the figure will
mach at the time of operation.

The point *a* indicates the spot at which the anastomosis was effected and where a small piece of the stomach wall was removed for microscopical examination As has been stated, the wall was about five millimetres thick and was composed of fibrous tissue and hypertrophied muscle As is sufficiently well known simple fibrous or cicatricial obstruction of the pylorus leads to dilatation of the pyloric antrum, and never so far as my experience goes to an amount of hypertrophy and thickening at all comparable to that which existed in this case Taking into consideration therefore these factors, the absence of any indication of old ulceration the uniformity of the constriction of the pyloric orifice the gradual tapering off of the hypertrophied gastric wall from the pylorus towards the body of the stomach the absence of any malignant element the age

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stenosis occurring in the adult that is to say a form of stenosis usually met with in its severer type at an early period of life but when less severe not giving rise to symptoms until later years The condition appeared to me to conform to the particular type described by Maier,[1] where the pyloric portion of the stomach presented the appearance of a 'hour' or 'funnel (trichterformig) The post mortem examination failed to elicit the cause of death The atrophied condition of the gastric glands seemed to suggest a mucous membrane
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of interest The artificial orifice admitted the thumb was
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irritation the result of
into the bowel

Considering all things, it does not seem possible to connect the cause of death in any way with the consequence of operation If one ventured a surmise in the absence of any possible revelation associated with an examination of the brain—which unfortunately was forbidden by the friends—it would be that diabetes of which there were evident symptoms at one time during illness had been the cause of death That co of
the pylorus is a cause of cre
ore

In a paper read before
Society by Dr E Cautley
and Mr Clinton T Dent[2] in December 1902 the authors refer to several cases of this nature and there seems no reason for doubting that from whatever cause the hypertrophic stenosis arises it may vary considerably as to the amount of obstruction present and according to the patency of the orifice so are the symptoms early or late in their appearance

Glasgow

NOTES UPON TWO RENAL CASES

By W H

SUPERNUMERA TO ST
MARY S HO THE
FRENCH HOS

As the following cases appear to me to present certain points of uncommon interest I venture to record them

CASE 1 *A moveable kidney with complications* — The patient a woman, aged 66 years, came to the French Hospital in November 1903 with a freely moveable right kidney She complained of considerable pain and was unable according to her account to continue her work as cook owing to the frequent attacks of trouble There was nothing abnormal in the urine but on examination the right kidney was found to be so loose that it could be displaced into the iliac fossa, it was slightly enlarged and tender The patient was a woman of spare frame whose general health had been excellent until the last nine months previous to her admission, during which time she had suffered from frequent attacks of vomiting and from pain in the right kidney region There were no contra indications to operation so the kidney was exposed by a lumbo inguinal incision and as its appearance did not suggest any organic disease it was sutured to the muscles of the posterior abdominal wall by sutures of silkworm gut which passed well into the kidney substance The capsule proper was not split and the wound was closed in the usual manner The course of the case was entirely favourable until the sixth day, when it was found that there was a slight leakage of urine This appeared to come from the middle of the wound where the deepest suture had been passed into the kidney The amount of urine which escaped daily varied from two to four drachms A number of expedients were tried to close the fistula which at the end of 14 days presented a typical pouting appearance Although the cautery certainly diminished the discharge it did not completely stop it, so that some three weeks from the original operation the middle
of the wound was opened up and three deep stitches
and the patient
kidney firmly fixed

to the lumbar region l for
In May 1904 she was
recurrence of pain gard
found to be enlarged
to this latter point there was some difference of opinion as although during deep inspiration a certain feeling of mobility was communicated to the hand the main mass against the posterior abdominal wall seemed fixed The original wound was soundly healed and the general health was good The urine was normal but as the kidney was markedly enlarged a second operation was performed, the kidney being exposed through the old incision There was a firm scar and the fibrous capsule of the organ, the internal capsule proper, was fixed to the surface of the quadratus lumborum but on opening this there was an escape of an ounce or more of clear fluid presumably urinary in nature The kidney was now found to be lying free inside its fibrous capsule (except at the hilum) and to move within it Its surface presented the same appearance as that of a kidney stripped of its capsule upon the post mortem table To make sure that there was no disease in the interior of the organ it was opened along the convex border and a finger was passed into the pelvis Everything was healthy so the wound in the renal substance was closed with fine silk sutures The fibrous capsule was scarified on its inner aspect—i e the surface which should have been adherent to the renal parenchyma It was freely opened along its posterior part and by means of sutures which also included some portion of the kidney was fixed to the posterior
abdominal muscle he kidney
uneventful the case was
firmly fixed and l

CASE 2 *Bilharzia hematobia affecting the kidney* —This patient a man from South Africa had suffered for several years from pain in the kidney regions with occasional attacks of renal colic The pain affected both kidneys but the left side was always the more tender and was attacked first There was no definite history of gravel there was no family history suggestive of tubercle, but the patient stated that he had suffered from bilharzia for some nine years The general health was good He was a married man with a family and had always led an active life but was troubled by these attacks of colic which were becoming more frequent and which upset him for several days when they occurred There was no frequency of micturition but there was always a noticeable quantity of blood in the urine during and after the attacks of pain Examination of the kidney did not afford much information nothing abnormal could be detected and the testes were normal The urine was carefully investigated by Dr W H Willcox of St Mary's Hospital who made the following report The total quantity (12 hours) was 24 ounces It was amber coloured, with a slightly alkaline reaction of specific gravity 1020 albumin one-twentieth was present on boiling The chemical test for blood was given faintly with the urine but markedly with the sediment, sugar and bile were absent The amount of urea present was 2 05 per cent The deposit gave the chemical test for pus and on examination under the microscope showed the ova of many bilharzia hematobia, also a large number of oxalate crystals forming as it were casts of the renal tubules Leucocytes and red blood

[1] Virchow s Archiv 1885 Band cii Heft 3 p 23.
[2] Transactions of the Royal Medical and Chirurgical Society vol lxxxvi

corpuscles could also be seen. The above report left the diagnosis very open, for although there were a large number of oxalate crystals it was not clear that the symptoms were dependent upon a calculus in the kidney. A skiagram was taken but this showed the renal regions clear without any suggestion of a calculous shadow. As the patient had previously been treated in South Africa for excess of uric acid he was put upon a rigid diet and advised to abstain from all oxalate-forming foods. May 2nd.—Ten grains of urotropin twice a day and alkaline mineral waters in large quantities were prescribed and massage was applied regularly to the loins. Under this treatment he improved in general health and put on flesh but on July 9th and 24th and August 23rd he had three definite attacks of renal colic, accompanied by vomiting and the passage of blood-stained urine. The attacks lasted from two to three days and morphine was administered owing to the severity of the pain. There was no frequency of micturition during or after the attacks nor was there any pain during the act. On August 26th he was again examined, three days after the last bout of colic, and the left kidney was found to be tender, while the muscles on the left side were held rigid. The urine was again analysed by Dr. Willcox who reported as follows. It was of specific gravity 1022 and its reaction was alkaline; there were albumin, blood, and pus as before. There were no casts and no oxalate crystals but some stellar phosphates and a few ova of the bilharzia hæmatobia. It appeared from this report that the urotropin had been effectual in diminishing the number of bilharzia ova, while the other measures adopted had abolished the oxaluria. As it appeared no longer probable that the symptoms were solely due to excessive excretion of oxalates, and as it was possible that the parasite had formed the nucleus of a calculus which was causing these attacks of pain, and as in addition the patient was exceedingly anxious that some further means should be adopted to prevent their recurrence before his return to South Africa, the kidney was explored on Sept. 8th by a lumbar incision. No calculus could be felt from the outside, so the pelvis was opened by an incision along the convex border of the organ. There was no calculus in the pelvis and a probe passed easily along the ureter into the bladder, but the whole of the interior of the pelvis and, as far as could be ascertained, of the ureter was filled with a soft friable growth, which felt like the pile of soft velvet covered by a layer of jelly. It was not a papilloma but apparently a granulomatous mass presumably caused by the bilharzia parasite. The exploration was followed by very free bleeding as the masses in the pelvis were exceedingly vascular. The renal wound was closed by interrupted sutures but a tube was inserted into the lower end of the renal incision so that some estimate might be formed of the function of that kidney. The case progressed favourably, blood and bilharzia ova were passed in large amounts per urethram for several days, when they gradually diminished and the blood finally disappeared. The tube was removed from the kidney after 48 hours, urine being excreted along it. This excretion was continued for three days, after which it ceased entirely, the wound healing by first intention. As the result of the discovery at the operation urotropin was again administered in the same amount as before, though no great hopes were held out as to its ultimate success. Since the patient was anxious that something should be done with the object of eliminating the tenacious parasite which was preying upon him I determined to inject a solution of perchloride of mercury, a treatment I had recently heard of as practised with remarkable success by Dr. Binet in Cairo. I received details from one of his patients, a medical student. The injection is made into the veins, with a solution of perchloride in normal saline, one milligramme to five minims of the saline. In this case the injections were first made into the subcutaneous tissues of the abdominal wall and in no instance was there any pain, swelling, or inconvenience; two punctures were made each day and at each one milligramme of the salt was injected. After a week of this treatment the needle was inserted into the vein of the forearm and the total daily allowance of the perchloride, two milligrammes, was discharged into the blood stream at one sitting. No ill-effects were noticed, but at the end of a month he was compelled to return to South Africa where he intends to continue the treatment for at least four weeks longer, since the total duration in Dr. Binet's hands was from six to eight weeks. Since the commencement of the mercurial treatment he had no recurrence of the renal pain and the ova of the bilharzia have almost disappeared from the urine. The following is the report made shortly before the patient sailed from England at the beginning of November: "Specific gravity 1018. Albumin a trace; amphoteric reaction; no blood; a very few bilharzia ova. In many films prepared from the sediment they were absent and it was only by careful searching that they could be detected, a marked contrast from the state of the urine on the first examination. A few oxalate crystals and a number of leucocytes."

I have thought it well to publish these cases as they seem to be both interesting and unusual. With regard to the first I can find no similar cases recorded in Mr. Henry Morris's exhaustive treatise on diseases of the kidney. The condition was, in my opinion, set up by the use of a silkworm-gut suture of considerable thickness which allowed of no yielding during the ordinary movements of respiration and so acted as an irritant to the kidney. I have no doubt that it was passed too deeply into the kidney substance but had I employed silk I do not think that the same result would have followed. As the urinary fistula closed in the loin the secretion which was no longer able to escape externally made its way along the suture to the space between the renal substance and the fibrous capsule which was gradually stripped off the organ by the accumulating fluid until the final state, one of false or external hydronephrosis, was produced.

The second case is equally interesting. In the first place, the symptoms were almost completely typical of renal calculus and the presence of the bilharzia ova in the urine did not negative this diagnosis since it was quite possible that they had formed the nucleus of a stone. Again, the condition is uncommon; no mention is made of a similar affection in Morris's book and other works on general and special surgery are silent on the subject. In the museum of St. Bartholomew's Hospital No. 23930 shows a like state of the ureters and kidneys from a fatal case which occurred at Alexandria. Although it is said that operations on patients who are extensively affected with this parasite are apt to be followed by a general outbreak of parasitic growths in the region of the incision no such complication was met with in my case, though possibly the thorough preliminary treatment with urinary antiseptics had considerable influence in checking it.

As far as treatment of the disease itself is concerned our text-books do not offer us much assistance or consolation. A number of drugs are mentioned, though no great faith in their efficacy is expressed, and we are told that the patient will in most cases outgrow or outlive his unwelcome guest. This is a hopeful view which may be justified in a large number of instances but when we meet with examples where it is evident that the parasite has a firm hold and is spreading to such an extent as to endanger the patient's life we are compelled to look around for more active measures. The results of mercurial treatment in the case previously mentioned encouraged me to hope for some benefit in the present instance and, so far as I can see in this instance, the method is exceedingly valuable and worthy of a more extended trial. I did not consider that any local treatment of the kidney, such as scraping the pelvis, was desirable as it would have been followed by very profuse hæmorrhage and hæmaturia and there was every reason to suppose that the opposite kidney was affected in a similar manner.

Spanish-place, W.

A CASE OF ANENCEPHALOUS MONSTER.

BY H. BEATTIE, M.R.C.S. ENG., L.R.C.P. LOND.

THE case described below, of which a photograph is reproduced, may prove of some interest. It occurred in a healthy primipara, aged 28 years, on March 14th, 1902. She has since given birth to twins, boy and girl, both healthy. The fœtus was born alive after seven hours' normal labour and proved to be a female of unusual size and weighing nine and a half pounds. She lived for 36 hours. The respiration was peculiarly jerky and hurried in character and no voluntary movement of the limbs was observed. There was a complete absence of the cranial vault and in its place was a soft nodular mass of apparently vascular connective tissue 10½ inches in circumference. The eyeballs appeared to be bulged forwards,

preventing the complete closure of the eyelids, with opacity of the lens. The mother stated that when two months pregnant she was frightened one day on going into her dimly lighted coal cellar by a large toad jumping out.

The chief clinical i[illegible] in the case was the difficulty of diagnosing the exact [illegible] e stage, the doughy feeling of the [illegible] place of the cranial vault making [illegible]

Necropsy.—On reflecting back the vascular covering it was found to be resting on the base of the skull, the bones composing which were thicker than natural, the mass consisting of connective tissue. There was no cerebrum but the medulla and the spinal cord in its upper part were adherent to the connective tissue. There was no trace of any optic nerves.

This case would appear to be an instance of that form of anencephalia described by Geoffrey St. Hilaire as real anencephalia. In D. Macalister's valuable translation of Ziegler's "Pathological Anatomy" he states that the arrest of development or agenesis of the cerebrum must take place at an early stage of the development of the fœtus. The maternal impression at two months, which I have quoted for what it is worth, might correspond with the time in which the intra-uterine changes causing the agenesis took place.

Banbury.

APPENDICITIS AND PREGNANCY:

NOTES OF A CASE WITH OPERATION AND RECOVERY.

BY H. A. LEDIARD, M.D. EDIN., F.R.C.S. ENG.,
HONORARY SURGEON TO THE CUMBERLAND INFIRMARY,
AND
R. E. SEDGWICK, B.A., M.B., B.C. CANTAB

ABORTION or miscarriage—with the possible loss of two lives—constitutes the main barrier to operation and especially to abdominal section during pregnancy. Operation is at times imperative and many cases are on record in which ovarian and other tumours have been successfully removed without interfering with the normal course of pregnancy.

Judging from records appendicitis is not, so far as we have been able to trace, a common complication of pregnancy and the following case has been noted because of the somewhat unusual concurrence of appendicitis and pregnancy and because of its unusual and fortunate termination. In discussing the question of operation during pregnancy Jonathan Hutchinson, jun.,[1] records a case of a young woman who, in the ninth month of labour, was seized with true gangrenous appendicitis and diffuse peritonitis. After excision of the appendix and free drainage she recovered and bore a living child a month later. Kelly,[2] in discussing operation during pregnancy, mentions appendicitis as one of nine main conditions in which operation may be demanded. He refers to a case of appendicitis during pregnancy with consequent death quoted by Clement Godson in the discussion of H. Michel's paper.[3] He reports also in brief two cases in his own experience in which pregnant women were confined to bed with attacks of appendicitis. Both recovered and were delivered at term without surgical operation. The same author quotes a case, recorded by Mundé, of appendicitis during the last month of pregnancy. The patient on the sixth day was delivered of a dead child and six days later a localised appendical abscess was opened and drained successfully. McArthur's two cases are also referred to by Kelly. In the first of these gangrenous appendicitis was found in the fourth month of pregnancy. Abortion followed the operation with subsequent death from general peritonitis. In the second, which occurred during the fifth month of pregnancy, the abscess cavity was partially walled in by the uterus. Abortion followed operation, with death from general peritonitis.

These last three cases are included in a list of cases which appears in a monograph on the subject by Pinard.[4] This author tabulates and criticises 45 cases which he has collected chiefly from American and French sources. 30 of these cases were operated on. The results were as follows:—

	Maternal mortality.	Infantile mortality.
Cases operated upon, 30	10 = 33 %	11 = 36 %
Cases with *local* peritonitis, 22 ...	5 = 25 %	—
" " *general* " 8 ..	5 = 62 %	—
Cases not operated upon, 15	2 = 13 %	2 = 13 %
Cases with general peritonitis, 1 ...	1 = 100 %	—

From a consideration of his own and other cases Pinard concluded that in such cases delay was dangerous, and he therefore advised immediate operation as soon as the diagnosis was assured, believing that by such means the best interests of both parent and child were secured.

The following are the notes of our case. The patient was 40 years of age and married. At the latter end of August, 1904, she was seized with pains in the lower right half of the abdomen, she being nearly six months pregnant at the time. The pain continued and was accompanied by constipation but without vomiting. Poulticing relieved the pain and after being in bed for four days she got up and did her routine work, which was rather more arduous than that of the ordinary housewife. On the sixth or seventh day pain again came on and she returned to bed with fever and constipation. The pain in the right iliac region was accompanied by swelling and tenderness. On Sept. 3rd she was visited in the country in consultation by one of us (H. A. L.) and was found to have acute tenderness in the appendix region with probable pus formation. On the succeeding day the patient was brought to Carlisle for operation, which was performed two hours after arrival as it was considered imprudent to wait longer. She was a thin, very spare, and very nervous woman who had borne eight children in nine years besides having had a miscarriage. Her mental perception and memory were not acute. She had a goitre of moderate size which had "descended" from her mother, one sister being similarly affected. She had had two attacks of "inflammation of the bowels," both occurring in the same part of the abdomen at two previous and separate pregnancies—she thinks "about the fifth month." Her temperature on admission was 99° F. and her pulse-rate was 80. Her tongue was dry and brown. The abdomen showed the fundus of the uterus at the umbilicus while between the umbilicus and the right anterior superior iliac spine there was some slight swelling.

The patient was anæsthetised with chloroform and the

[1] Manual of Operative Surgery, Treves, second edition, p. 7.
[2] Operative Gynæcology, vol. ii., p. 403.
[3] British Gynæcological Journal, August, 1899, p. 109.
[4] Annales de Gynécologie, Mai, 1898.

incision through the parietes in the usual place allowed omentum to bulge forward into the wound. This omentum covered an abscess cavity containing about three ounces of pus (not foul). A gauze drain was inserted and the patient was put back to bed. The wound speedily became clean and granulating but gaped considerably, and stitches were from time to time inserted to try to close it. The plugging was removed on Sept. 6th. Pregnancy was obviously advancing further and the movements of the child were both seen and felt. This did not tend to the formation of a good scar. At the end of three weeks omentum began to protrude from the wound. This was ligatured and cut off and subsequently the wound began to close. A month after operation—namely, on Oct. 2nd—the patient was moved on to a couch for a short time and within 24 hours she miscarried in the sixth month of pregnancy, the child being dead. There were no complications and she was discharged at the end of a fortnight—namely, on Oct. 15th—wearing a bandage.

Throughout her illness the patient had a singularly rapid (counted) pulse. No other explanation than nervousness could be given, her carotid (visible) pulse being normal during conversation. Her temperature was almost uniformly subnormal, never rising above 99° except on Oct. 4th, 5th, and 9th.

In this case the diagnosis of suppurating appendicitis was fairly clear and operation was not delayed, since it was felt that unless removed the tendency of the pus was to track upward towards the liver in the path of least resistance. In view of the rapid growth of the uterus during the latter months of pregnancy the advisability of procuring miscarriage was discussed. For some days after operation the wound seemed to get more and more extensive and gaping and omentum was protruded. It was felt that when the wound *did* heal several unpleasant possibilities might present during labour. The scar, recent and thin, might rupture; a large ventral hernia in all probability would form either during labour, with possible intestinal constriction as a result, or afterwards, in which case a second operation would be necessary for its cure. The risk of procuring miscarriage was thought to be sufficiently great to counter-balance what were after all only reasonable possibilities or probabilities and nature finally and fortunately came to the rescue and solved all difficulties.

Carlisle.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF FRACTURE OF THE SURGICAL NECK OF THE HUMERUS IN AN OCTOGENARIAN.

BY PHILIP E. HILL, M.R.C.S. ENG.,
SURGEON TO THE CRICKHOWELL WORKHOUSE INFIRMARY.

A MAN, aged 80 years, was admitted into the Crickhowell workhouse infirmary on Oct. 20th, 1904, suffering from a fracture of the surgical neck of the right humerus. On examination the arm was found to be swollen considerably with ecchymosis extending from the shoulder to the wrist and the patient was in great pain. Some days prior to his admission he had been seen by a medical man who had placed a pad in the axilla and strapped the arm to the side. Coaptation having been effected a pyramidal pad with its base upwards was placed in the axilla and two splints were applied, an angular one to the inner side of the arm, and an outer one extending from the shoulder to the elbow. The arm and chest were then bandaged together and the hand and wrist were enveloped in a sling. The patient was placed on a water bed and necessarily kept there during the whole of the treatment. Unfortunately, at the end of six weeks he died from cardiac failure induced by the excessively low temperature which prevailed at the time.

I made a post-mortem examination of the limb in order to ascertain what amount of repair, if any, had taken place. I found that the fractured ends were accurately adjusted and that firm bony union had been accomplished, a result hardly anticipated in a man where the reparative processes are presumably deficient in consequence of the vital powers being exhausted by age and debility as evidenced by the fact that from the first there was incontinence of urine and fæces.

Crickhowell.

A CASE OF SURGICAL EMPHYSEMA IN PULMONARY TUBERCULOSIS.

BY R. D. ATTWOOD, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER, SOUTHWARK UNION INFIRMARY.

A MAN, aged 38 years, was admitted into the Southwark union infirmary in June, 1904, with extensive phthisis of the right lung. On Nov. 12th his face was noticed to be extremely swollen; on examination he was found to have surgical emphysema of the face and right side of the chest. The emphysema spread to the left side of the chest and abdominal wall. The patient died on Nov. 18th. At the post-mortem examination it was found that the larynx and trachea were normal. There was no pneumothorax. The right lung contained many areas of consolidation and several small cavities. Near the right apex was a small cavity over which the lung was adherent to the chest wall, and which communicated with the parietes by a small opening in the third intercostal space.

A CASE OF ENTERIC FEVER DUE TO EATING OYSTERS.

BY JOSEPH CLOUGH, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a boy, aged four years, who, about the middle of August, went for a two hours' sail at Scarborough. He was very sea-sick and vomited violently. On landing he ate two oysters from a street stall without any vinegar on them. Seven days afterwards he fell ill and 14 days afterwards he had distinct enteric fever spots. For the first three weeks of his illness he progressed favourably but at the end of the fourth week his abdomen became swollen and painful, and he suffered from vomiting, tendency to general coldness, and feeble circulation. During the first half of the fifth week he was sleepless and delirious, his temperature varied from 102·5° to 103·5° F., and there was diarrhœa, some motions being passed in bed involuntarily. I ordered him chicken broth with plasmon in it and castor oil in doses of about a teaspoonful, after which he immediately began to improve. His temperature did not become normal till the end of the seventh week of the illness. The boy is now as strong as ever.

Hunslet, Leeds.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procemium.

ST. GEORGE'S HOSPITAL.

THREE CASES OF DISEASE OF THE APPENDIX CÆCI.

Under the care of Mr. H. S. PENDLEBURY.)

CASE 1. *Intussusception of the appendix; excision; recovery.*—A girl, aged seven years, was admitted into St. George's Hospital on June 20th of this year and the following history was obtained from the mother. The child had been in indifferent health since an attack of scarlet fever 12 months previously but had had no serious symptoms until eight weeks before admission, when paroxysmal attacks of abdominal pain commenced associated with rectal tenesmus; the pain was referred mostly to the umbilicus and to the right side. Vomiting occurred whenever the pain was severe, the last occasion being ten days before admission. The

bowels were at first much constipated, but later acted well with the aid of castor oil and enemata. Early in June blood and slime were noticed in the motions; this occurred on two consecutive days but had not been noticed since. The child was losing flesh rapidly, having formerly, according to the mother's description, been "nice and plump."

On admission the patient was found to be a very thin delicate-looking child. The pulse was 124 and the temperature was 98° F. The abdomen was greatly distended and coils of large and small intestine were seen in active peristalsis; the abdominal walls were quite flaccid and moved well with respiration; there was no tenderness and no swelling could be detected. Nothing abnormal was felt by the rectum; an enema resulted in a formed stool covered with blood and mucus.

Operation was performed by Mr. Pendlebury on the morning after admission. No abdominal or rectal tumour was felt under the anæsthetic. The abdomen was opened in the midline below the umbilicus [illegible] found in the right iliac fossa [illegible] and proved to be an intussus[illegible] cæcum; the tip of the appendix was just visible on the surface of the bowel. It was fixed in its new position by very firm adhesions and when attempts were made to reduce it the peritoneal coat of the cæcum began to tear.[1] The intussuscepted appendix and the surrounding portion of the cæcum were therefore excised and the opening into the bowel was closed with a continuous suture of fine silk. The patient recovered well from the operation; for two days she was fed by the rectum and was then given fluid food by the mouth. On the eighth day there was a sharp attack of abdominal pain and the temperature rose to 102°; these symptoms, however, passed off in 24 hours. A part of the wound broke down and was slow in healing, but in other respects convalescence was uneventful.

CASE 2. *Acute gangrenous appendicitis in a hernial sac in an infant aged 18 months; operation; recovery.*—A male child, aged 18 months, was admitted into St. George's Hospital on March 8th, 1904. The mother stated that the child had been born at the seventh month of pregnancy and had always been weakly and bronchitic; a hernia appeared shortly after birth and circumcision was performed with the result that the hernia had not been seen for a period of six months before admission; no truss had been worn. On March 4th the hernia reappeared; on the 5th the mother found that it was irreducible, larger, and very painful. [illegible] the following day and taxis [illegible] wizened, feeble subject with moderate hydrocephalus, the circumference of the head being 18 inches. The pulse was 140 and the temperature was 101° F. The right inguinal canal and the right side of the scrotum were occupied by a tense, tender, irreducible swelling which was dull on percussion and without impulse on crying; there was great œdema of the penis and scrotum.

Operation was performed two hours after admission by Mr. Pendlebury. An incision was made through the œdematous tissues lying over the inguinal canal and a long tubular hernial sac was found and opened. Within the sac was some turbid fluid and there was a greatly swollen appendix two and a half inches long with patches of gangrene over its distal half; at its extremity were two perforations, its mesentery was greatly thickened, but the cæcum which was lying in the neck of the sac was absolutely normal. The testis was completely descended. Formal amputation of the appendix was then performed; the greater part of the hernial sac was excised and the radical cure completed by a modification of Bassini's method. The bronchitis which had existed previously became somewhat aggravated after the operation. Vomiting occurred once on the following day but apart from this convalescence was uneventful and the child was discharged on March 26th.

CASE 3. *Acute appendicitis; operation; onset of symptoms of portal pyæmia one month after operation on the day of intended discharge to convalescent home: death.*—A youth, aged 18 years, was admitted into St. George's Hospital on May 16th last during a first attack of appendicitis. Pain in the right iliac fossa had commenced on the 12th and vomiting occurred on the two following days; there had been absolute constipation except for a small motion after an enema.

[1] The specimen can be seen in the Pathological Museum of St. George's Hospital.

On admission there were moderate tenderness and rigidity in the right iliac fossa. An indefinite swelling was felt in the region of the appendix. The pulse was 112 and the temperature was 100·8° F. The general condition was good.

The abdomen was opened three hours after admission by Mr. Pendlebury. A gangrenous appendix was found closely matted to the cæcum by dense adhesions. There was no actual perforation; a large stercolith was felt in its interior. The surface of the cæcum was œdematous and blotchy and around it was a small quantity of serous fluid with a strong fæcal smell; no pus was present. The appendix was separated with some little difficulty and amputated; the wound was then closed without drainage.

The patient recovered well from the operation, but on the sixth day the wound broke down and about five ounces of very foul pus escaped after removal of the stitches. Daily [illegible] the wound steadily closed, [illegible] It was decided to send [illegible] on the 15th, but on the morning of this day a severe rigor occurred without apparent reason and was followed by bilious vomiting; the abdomen was perfectly soft and no abnormal physical signs were discoverable. During the following week jaundice developed and the liver became enlarged; the temperature, which had been normal since the day after operation, gradually became raised and then remained high and erratic; rigors occurred at intervals and were followed by vomiting. Antistreptococcic serum was injected without any apparent effect on the symptoms; the presence of portal pyæmia steadily became more obvious and death occurred on July 7th. At the necropsy most extensive septic thrombosis of the abdominal veins was found with suppurative pylephlebitis and splenic abscess.

DERBYSHIRE ROYAL INFIRMARY.

A CASE OF SUBCORTICAL TUMOUR OF THE BRAIN REMOVED BY OPERATION.

(Under the care of Mr. R. H. LUCE.)

A MARRIED woman, aged 32 years, the wife of a non-commissioned officer serving in India, gave the following history. While stationed at Bareilly, Bengal, in January, 1903, she began to notice twitchings in the right arm but without loss of power. In March, 1903, while washing, she was seized with a sudden numbness in the right hand with inability to move the fingers. The twitchings continued from time to time, starting generally in the little finger, and gradually increased in distribution, sometimes reaching as high as the elbow, and by May the hand had become almost useless. On June 9th her second child was born in hospital and she returned about the 19th. A few days later she had a more severe convulsive attack involving the whole of the right side, including the face and the leg. This was followed by paralysis of the right hand but left the face and the leg unaffected. She was admitted to hospital and remained there until the beginning of October, when she was invalided home to England. While in hospital she had repeated convulsive attacks. In November, during the voyage home, there was another severe attack which left the right leg partly paralysed and from this time the speech was affected. After her return home she had four or five attacks, each followed by unconsciousness. She began to have great pain in the head, chiefly in the occipital region. She vomited at times and was very giddy when she tried to stand.

The patient came under the care of Mr. Luce early in December. She was then almost confined to her bed. She was partially paralysed in the right hand and right leg. Her speech was slow and laboured. Most of the words could be produced but took a long time to get out. The hand and forearm were practically useless but there was some power in the muscles of the upper arm and shoulder. There was slight external strabismus of the right eye but no definite paralysis of any of the muscles. There were atrophy of the right disc and neuritis of the left running on to atrophy. The sight was failing; she could not read and could only distinguish people with difficulty. There was nothing in the history obtained to indicate any particular kind of tumour. She was treated with large doses of mercury and iodide of potassium without any improvement except that there was less pain.

On Jan. 12th, 1904, she was admitted into the Derbyshire Royal Infirmary. She had two fits after admission and it became evident that her sight was rapidly getting worse. On the 23rd she was placed under chloroform after a preliminary injection of one-sixth of a grain of morphine. The whole head was shaved and the fissure of Rolando was marked out by punctures, through the scalp, on to the bone. A horse-shoe flap with a base of about four and a half inches was turned down off the bone and three holes were made with a medium-sized trephine about one and a half inches apart, one on either side of the fissure at its lower end and one above the other two, directly over the fissure. The bridges between the holes were chipped away with forceps and the centre was removed so that a triangular aperture was obtained with about two and a half inch sides. The brain pulsated but the dura mater bulged forcibly into the wound. A triangular flap of dura mater was turned up to one side. On feeling the surface of the cortex, which looked normal, a firm portion could be distinguished beneath the surface. The superficial cortex was scraped off with a finger and a firm mass was exposed about one-sixth of an inch below the surface. This was situated mostly in front of the fissure of Rolando, occupying the lower part of both ascending convolutions and the posterior part of the lower two frontal convolutions. A finger was inserted round the tumour and it was dug out. It seemed to come out intact. There was little hæmorrhage until the tumour was removed when there was very free oozing. The cavity was lightly packed with sterilised gauze and the flap was stitched round except at the spot where the gauze was extruding. No bone was replaced. There was a good deal of hæmorrhage for the first 12 hours and when it ceased and the plug was removed there was a large hæmatoma under the flap. The flap united by primary union. The patient recovered consciousness soon after the operation. She was aphasic except for very few words but was perfectly sensible. There was almost complete paralysis of the right leg with loss of sensation. The hand and arm were in much the same condition as before the operation. The tumour proved to be a nodular tuberculous mass weighing seven and three-quarter drachms. It had not broken down at any part. A section showed well-marked giant cells.

The patient's general condition improved rapidly after the operation. She had no more pain and no more convulsions. After a few days the right leg became hyperæsthetic and then gradually recovered normal sensation. By Feb. 20th she could move the leg to some extent. The thigh muscles had recovered more than those of the leg. There was also considerable improvement in movement of the right arm. The optic neuritis had almost cleared up and the sight had improved. She could make herself understood, though she spoke with difficulty and often could not produce her words. There were still swelling over the hole in the skull and no pulsation. She left the hospital on Feb. 29th.

The patient was seen and examined again on June 4th. She had been away for a change and reported herself as being in excellent health. She was quite free from headaches and had had no signs of convulsions. The hæmatoma had subsided, leaving a slight depression through which the brain could be felt to pulsate. She could walk across the room without assistance, though she dragged the right leg somewhat. There was not so much improvement in the hand and arm. The fingers remained flexed into the palm of the hand. There was only the slightest power of extension of the fingers and wrist but fair flexion. She could flex and extend the elbow though feebly. Her speech was almost completely recovered except that it was slow and scanning. The sight was greatly improved. She could read Snellen's distance types. The vision of the right eye was $\frac{6}{12}$ and that of the left eye was $\frac{3}{36}$. The patient was seen again on Nov. 22nd. She had been in excellent health since last examined. She could now walk several miles without fatigue though still slightly dragging the right leg. There had been but little further improvement in the sight or the condition of the right arm and hand. She had been absolutely free from fits or headache.

Remarks by Mr. LUCE.—This case seems interesting and worth recording from two points of view. First, because the extremely classical character of the history and symptom which made the diagnosis of tumour and its position easy and, secondly, on account of the satisfactory result. The removal of tumours of the brain of which so much was expected at one time has not proved so satisfactory as was once hoped and the opportunity of meeting a completely removeable and non-malignant one is comparatively rare.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Chloroform Anæsthesia.

A MEETING of this society was held on Dec. 13th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Sir VICTOR HORSLEY, in [illegible] said that he had been interested in [illegible] chloroform *per se* as he had been responsible for the appointment of the committee nominated by the British Medical Association. The whole question that evening turned upon the administration of the drug in known doses. He differed entirely from Dr. F. W. Hewitt who thought it sufficient to watch the effects of the drug and neglected entirely the dose which he was administering. He considered that this neglect of dose was the cause of death in some cases owing to an excessive dose being inadvertently given. He thought the liminal dose was about the same for all adults and that the view expressed by Dr. Hewitt that one patient required a drop when another required a drachm was an error. During the induction period a 2 per cent. of chloroform vapour was required. From his experience with the Vernon-Harcourt inhaler he was of opinion that 2 per cent. vapour was sufficient for the induction of anæsthesia both in man and animals. For the maintenance of anæsthesia, however, as soon as the skin incision had been made a percentage of 0·5 or 0·4 was sufficient. He referred to the use of Skinner's mask and thought that though perfectly safe in the hands of a skilled administrator, yet in the hands of less experienced persons it gave rise to a very irregular percentage in the quantity of chloroform administered. He did not believe that the intercurrent asphyxia alluded to by Dr. Hewitt could occur during the administration with a regulated chloroform inhaler but he had seen it occur with the open method and it was due to an overdose of the drug. He next dealt with the so-called vaso-motor effects of chloroform and denied that these occurred. He exhibited charts illustrating the fall of blood pressure and showed that this fall in blood pressure was proportional to the quantity of chloroform given. It had been stated by Dr. Hewitt that deaths occurred during light anæsthesia. He did not believe that such deaths occurred but that they were due to the high percentage of chloroform given inadvertently by the open method. He had but little doubt that some form of chloroform regulator would soon become almost universally adopted by the medical profession.

Lieutenant-Colonel E. LAWRIE, I.M.S. (retired), said that the dangers of chloroform anæsthesia were merely the dangers of a faulty method of administration and there was no danger in chloroform when it was properly given. He referred to the general results established by the experimental data of the Hyderabad Commission. The commission proved that diluted chloroform, provided it was not too dilute and the breathing of the animal was regular, gradually caused an accumulation of the anæsthetic in the blood sufficient to produce, first, unconsciousness, then narcosis, then cessation of the respiration, and finally death from failure and stoppage of the heart. A higher concentration could only bring about the same sequence of events in a shorter time and if the concentration was so excessive as to cause irregular respiration, holding of the breath, or struggling, the animal became more or less asphyxiated and gasped in irregular overdoses which might kill it with still greater rapidity. Clinically, it was an extraordinary fact that the excessive concentration which in certain cases led to such rapidly fatal overdosing in others conduced in a way which nothing else possibly could to the regular breathing [illegible] y and it was then quite as safe in the [illegible] anæsthesia as the lowest concentration. [illegible] the essential factors in chloroform [illegible] luted chloroform and regular respiration and it was the regularity of the breathing alone which

insured a regular dose of the anæsthetic and which maintained the regular action of the heart and of the circulation. He said that no form of inhaler could relieve the anæsthetist of any portion of his responsibility, but an apparatus introduced an element of danger into the administration which bore an exact proportion to the amount of skill and care required for its management.

Dr. P. M. CHAPMAN (Hereford) said that he had shown at the meeting of the British Medical Association at Oxford a Dubois apparatus but it had received but little attention. He considered that any apparatus was bad in which the patient furnished the motive power for the inspiration of the air over the chloroform. In the Dubois apparatus the chloroform was brought to the patient by propulsion. An exact percentage could be given by this method but it was difficult to get more than a 2 per cent. vapour unless special means were adopted. Other advantages of this apparatus were that the mask could be cleaned easily, the administration could be performed easily by one person, and it was not possible to increase the percentage of chloroform by turning the handle of the pump more rapidly as had been asserted. He asked if any deaths had been recorded during the use of the Vernon Harcourt apparatus.

Dr. DUDLEY W. BUXTON, in reply to this last question, said that he had never met with an instance of death during the administration of chloroform with the Vernon Harcourt apparatus and he had never seen any dangerous symptoms during such administration.

Mr. F. S. EVE said that the only apparatus of which he had experience was the Vernon Harcourt apparatus. He considered that it was cumbersome and could not be used for operations abo[illegible] possessed the [illegible] muscles in pro[illegible] chloroform succ[illegible] than upon the [illegible] ether, chloroform sequence, owing to the cyanosis which was produced by the administration of the nitrous oxide gas.

Mr. G. ROWELL said that he had used Dr. Levy's apparatus and was of opinion that in order to obtain the best effects it was necessary to increase the percentage to 3 per cent. of chloroform vapour during the induction stage, while 1 per cent. only was necessary for maintenance of anæsthesia. The rapid production of anæsthesia was the great advantage over the Vernon Harcourt apparatus. He did not, however, advocate the administration of chloroform by an apparatus. He thought that the individual variations were so great and the condition of the patient was influenced by the state of the higher centres, together with the general nutrition and habits of the patients that it was impossible to adopt a standard dose for all. It was not possible to give so many units of chloroform for so many units of body-weight. He thought that the only secure method of administering chloroform was to observe all the symptoms as they arose and to note, first, the nature of the respirations; secondly, that too strong vapour was not given; and thirdly, the reflexes. Interference with respiration was the commonest cause of danger. He protested against the premature and futile attempt to reduce the administration of chloroform to a mere matter of weights and measures.

Dr. J. F. W. SILK cordially endorsed the views of Dr. Hewitt. He was further of opinion that comfort and safety in the administration of chloroform could best be improved by taking greater care in the education of the student who should have more opportunities of obtaining experience in the administration of anæsthetics before he left the hospital and that the routine use of pure chloroform was to be deprecated. As a substitute he suggested the more frequent employment of some mixture of chloroform and ether, which was certainly safer than pure chloroform, produced a type of anæsthesia hardly to be distinguished from it, and could be given in a very simple form of apparatus. Dr. [illegible] ination should be [illegible] rators, and that in [illegible] to accept without inquiry the first person who might offer himself for the task. He was not convinced that it would be of any great advantage to introduce any of the machines for giving chloroform that [illegible] He was of opinion that they were of nece[illegible] supplant simpler [illegible] certainly did but [illegible] administration depended upon the machine rather than upon the administrator; that the importance of a knowledge of the exact strength of the vapour given off by the machine had been very much over-estimated; and that as patients varied so much as to the way in which they responded to the drug he should continue to teach that it was essential to watch t[illegible] courage [illegible] the anæ[illegible]

Dr. J. BLUMFELD said that he spoke from personal experience with the [illegible] he had had a large [illegible] had had a small experience. He [illegible] arcourt apparatus had the great [illegible] long time to induce anæsthesia, that the apparatus was very cumbersome, and that there was great difficulty in getting a satisfactory condition of relaxation in the patient. He did not think that any regulated inhaler would give greater safety in the administration of c[illegible]

M[illegible]

Ha[illegible]

he [illegible] but when once anæsthesia had been induced the apparatus acted well. In one case while the apparatus was in use the patient ceased to breathe and had symptoms of an overdose of chloroform but artificial respiration restored the patient. In another case the apparatus was jerked and the chloroform was thrown over the patient's face. In a third case the va[illegible] eight of th[illegible] cases he ha[illegible] after anæs[illegible]

Dr. Levy's [illegible]

stered in too [illegible] the medulla [illegible] respiration. during chloro[illegible] vagus. The [illegible] grain) entirel[illegible] above condit[illegible] weaker and t[illegible] to the chloroform [illegible] diminished the tendency to produce inhibition and caused both the blood pressure and the respirations to be maintained even with high percentages of chloroform vapour in the air [illegible]

[illegible] of extreme value in cases of doubt and in emergencies. Much difference of opinion with regard to chloroform was due to a common error in the conception of the corneal reflex and to errors in the technique of eliciting it. During the administration of anæsthetics the anæsthetist's attention should be primarily devoted to maintaining efficient respiration and a free airway, because in the human subject the difficulties and dangers of anæsthesia were far more largely due to asphyxial factors intrinsic to the patient than to the action of the drugs used, the simple dosage of which could be readily learned in two or three lessons by the average man. This fact was not yet sufficiently recognised nor appreciated by workers in the laboratory who were not in the constant habit of handling the anæsthetised human being. In order to keep the airway clear all forms of stertor should be relieved directly they arose, whether buccal, nasal, glossal, tonsillar, palatal, epiglottic, mucous, laryngeal, or tracheal, whether they were purely mechanical or reflex, because if allowed to persist they tended to deepen and to introduce an unnecessary asphyxial factor into the narcosis. With regard to the actual dosage of chloroform the clinical evidence yielded by the degree of reflex response in the upper eyelid when the centre of the cornea was touched by the finger was the most valuable measure of the depth of narcosis, and if elicited in a proper manner it was not necessary or safe to abolish the same completely in both eyelids during [illegible] surgical operation under chloroform. During the [illegible] sistence of a "weakly active" corneal reflex in, at any [illegible] one of the eyes impairment of respiratory activity from [illegible] action of chloroform upon the medullary centre was never observed, but central respiratory depression and

commencing failure of function often supervened directly the corneal reflex was entirely abolished. Expressed in another way—when the corneal reflex was entirely absent in the human subject a condition in which central respiratory failure was common had been established. With regard to the dosimetric apparatus which was shown at the last meeting, applying this doctrine he would ask only this question: Could the corneal reflexes be abolished in the human subject during their use? If they could, he maintained that a condition in which central respiratory failure was common could be produced and they were, therefore, no safer than any other method.

Dr. A. D. WALLER said that there were four points on which he would touch: (1) obstructed respiration producing the effects of asphyxia was due to the retention of the drug in the body; (2) the Skinner mask, excellent in the hands of the skilled anæsthetist but dangerous in the hands of the inexperienced; (3) the dosage of the drug. Dr. Hewitt thought that dosage was not desirable. He (Dr. Waller) considered that chloroform anæsthesia should be spoken of in terms of dosage; and (4) if dosage was desirable what apparatus should be used. He considered an apparatus on the "plenum" system was to be preferred to the apparatus on the vacuum system.

Dr. LEVY and Mr. EDGAR WILLETT then replied.

Dr. HEWITT said the phenomena of chloroform anæsthesia observed in the physiological laboratory differed from the phenomena observed in the operating theatre. The anæsthesia spoken of by Dr. Waller and Sir Victor Horsley differed from the anæsthesia which he was wont to observe. Sir Victor Horsley had referred to the "analgesic" state as all that was required but he was convinced that most surgeons would not be content with simple loss of pain. The anæsthetist had to produce a condition which was far beyond that required by Sir Victor Horsley, for in operations on the abdomen a complete relaxation of the muscles was required. He did not know how this could be effected with an apparatus which only produced analgesia. Referring to the deaths under light anæsthesia, he said that these were likely to occur in a certain class of patients—stout with narrowed air-passages—during the stage of excitement. The great question which had been discussed was whether a regulating inhaler should be used or not. He thought the evidence of the clinical worker was not at present sufficient to warrant the giving up of the simpler method.

MEDICAL SOCIETY OF LONDON.

Subphrenic Abscess and its Treatment.

A MEETING of this society was held on Dec. 12th, Mr. JOHN LANGTON, the President, being in the chair.

Dr. E. R. HUNT communicated a paper on Subphrenic Abscess, based on an analysis of 38 cases collected by him from the records of St. Mary's Hospital and elsewhere. Subphrenic abscesses might be primarily classified as left-sided and right-sided, according to the relation they bore to the falciform ligament of the liver. The most frequent cause was perforation of, or extension from, some portion of the alimentary canal. In one-half of the total number of cases the primary lesion was situated in the stomach—namely, in 19 out of the 38. The other probable causes were duodenal ulcer, three; hepatic abscess, four; appendicitis, three; perityphlitis, four; malignant disease of the stomach two; renal calculus, one; splenic abscess, one; and injury, one. Left-sided subphrenic abscesses were met with more frequently than right-sided, and in only one of the 19 cases consequent on gastric ulcer did right-sided abscess occur. The pus was situated between the left lobe of the liver, the diaphragm, and the spleen. Sometimes the pus was situated to the left of the spleen, between that organ and the diaphragm. Of this group there were seven examples, all due to perforation through the posterior wall of the stomach. More rarely the abscess might be in front of the stomach and liver, being bounded in front by the diaphragm and abdominal wall and behind by the left lobe of the liver and the stomach; of this group there were three examples. Right-sided subphrenic abscesses were nearly always situated between the liver and the diaphragm, their spreading left and right being prevented by the falciform ligament and the thoracic wall. They tended to extend downwards and backwards in a large number of instances, not infrequently reaching as far as the right kidney. Subphrenic abscess might occur in either sex and at any age. It was mostly chronic but the duration of the symptoms might vary from a few hours to several months and the patient's previous history was of extreme importance. The onset might be very acute, with severe pain, retching or vomiting, and rise of temperature, pulse-rate, and respiration, but in some cases the onset of symptoms was slow and insidious. Pain at the angle of the scapula was not infrequent. Pyrexia of a remittent type was the rule but in debilitated persons a large abscess might form beneath the diaphragm without any rise of temperature. There was no sign or symptom pathognomonic of subphrenic abscess. As a rule there was distinct diminution of respiratory movement in the upper part of the abdomen, a diminution which early extended to the lower part of the thorax on the affected side. The respirations were frequently irregular and catching. Percussion gave varying results according to the amount of air or gas and pus present. The outline of the dulness should help to distinguish subphrenic abscess from pleural effusion, dilated stomach, and enlargement of the liver. In the large majority of cases the symptoms and physical signs would be referable to the thorax. The earliest thoracic signs were some impairment of resonance with diminution of air entry at the extreme base of the lung on the affected side. Roentgen rays would frequently be found of extreme value in diagnosis, as by their means any loss of mobility of the diaphragm might be seen. Owing to the tenacious character of the pus in some instances the most careful use of the aspirator might fail to indicate the presence of an abscess.

Mr. CUTHBERT S. WALLACE read a paper on the Surgical Treatment of Subphrenic Abscess. He first drew attention to the unreliability of the aspirator in the detection of pus in this situation. The reason of this lay in the pus often forming a thick tenacious layer on the surface of the liver instead of a definite abscess. The most trustworthy signs were deficient respiratory murmur at the base of one lung, pyrexia, and progressive enfeeblement. He next pointed out that the subphrenic spaces became infected in two ways—by local extension and by gravitation. Fluid set free near the mid-line of the abdomen tended to pass to the lateral parts and thence to invade either the pelvis or the kidney pouches, the psoas muscle at the brim of the pelvis forming the watershed between the two areas. Subphrenic abscess was nearly always intraperitoneal, though in some cases arising from appendicitis the pus tracked up behind the colon. In opening the abscess there were four routes that could be adopted—(1) through the abdomen; (2) through the loin; (3) through the pleura; and (4) through the pleura and abdomen. The first method was only to be advised when the abscess was in the hypochondrium and not yet localised. The second was useful in the early stages of an abscess tracking up the colon. The third was the ideal method; the excision of the ninth rib on the right and the seventh on the left was thought to be the best. It was recommended that at least five inches of rib should be resected and that the periosteum enveloping the rib should be entirely removed since its retention was apt to be followed by the formation of new bone and the blocking of the opening. The fourth or combined method was advocated in those cases in which in consequence of the tenacious nature of the pus efficient drainage was impossible. The method consisted in carrying the incision for the resection of the rib into the abdomen. By this means the wound gaped and the upper surface of the liver was exposed in the wound. The cavity could then be packed with gauze, the frequent removal of which helped to get rid of the noxious products. Lastly, it was pointed out that the disease had still a very considerable mortality—probably 50 per cent.—and that there was a danger of re-infection of the peritoneum even after the localisation and drainage of the abscess. Appendicitis played the leading rôle in the causation of Mr. Wallace's cases and those which he had collected from the records at St. Thomas's Hospital.

Dr. F. DE HAVILLAND HALL remarked on the value of comparing the statistics of these cases. It was very difficult to ascertain the cause. During life the gastric ulcer, which was so common a precursor, was latent. It was only at necropsies that the ulcer was found. The diagnosis might be difficult and subphrenic abscess might be confounded with pleurisy, pneumonia, pericarditis, pyo-pneumothorax, and enteric fever (at an early stage). The x rays were undoubtedly a valuable aid in some cases, revealing deficient movement of the diaphragm on one side.

Dr. ALEXANDER MORISON remarked on the secondary

involvement of the thorax. It was this feature which was a most valuable one for diagnosis, the point being that the thoracic signs in such cases were wholly disproportionate to the gravity of the general condition of the patient, and it was this fact which was such a valuable aid to the diagnosis.

Dr BERTRAND DAWSON had seen one case in which the

[illegible]

mentioned a case in illustration.

The PRESIDENT remarked that the tendency of the disease was towards death if unaided by surgery. Most of the cases which he had seen were related to appendicitis; other cases were related to disease within the liver. Operation should be performed as early as possible. The aspirator was of little use for diagnosis because of the thickness of the pus and for the same reason sinuses and chronic pyæmia, from which the patient might ultimately succumb, not infrequently resulted.

Dr. HUNT and Mr. WALLACE replied.

CLINICAL SOCIETY OF LONDON.

The Treatment of Intussusception.

A MEETING of this society was held on Dec. 9th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. CUTHBERT S. WALLACE read a paper on the Treatment of Intussusception in Children, based on a series of cases of intussusception in children treated at St. Thomas's Hospital and the East London Hospital for Children between the years 1898 and 1904. There were 20 cases in all, the ages varying between three months and 33 months. There were 12 males and eight females. Of the 20 cases 19 involved both the small and the large guts; the remaining case was one of the colic variety. 11 were single tumours and nine were double. Mr. Wallace believed that double tumours were more common than was generally supposed and he referred to the difficulty of nomenclature that was encountered if a complete classification was attempted. The diagnosis was clinched by the finding of a tumour and if there was any doubt of the presence of a tumour an anæsthetic should be given and the matter settled at once. The treatment was primary cœliotomy, the most convenient incision being through the right rectus beside the umbilicus. Mr. Wallace did not lay any great stress on the reduction of the tumour within the abdomen but thought that time was the most important element in the treatment. The after-history of the cases seemed to show that as far as the ultimate result was concerned the method of suture of the abdominal wall was immaterial. The method favoured was by deep sutures through the whole thickness and buried sutures through the sheath of the rectus. By this method the danger of the incision coming open from failure of union was reduced as far as possible. Of the 20 cases four died, giving a case-mortality of 20 per cent. If the two cases of resection were excluded the case-mortality fell to 11·11 per cent. Mr. Wallace finally referred to the great fall in the case-mortality that had taken place of late years. Statistics drawn from the records of St. Thomas's Hospital showed that there was a marked increase in the number of cases of intussusception admitted to hospital.

Mr. C. H. FAGGE read a paper on the Treatment of Intussusception in Children by Laparotomy, founded on the results of 18 laparotomies, of which 17 were primary and one was undertaken after two attempts at reduction by inflation had failed. In 16 a tumour was discovered either per abdomen or per rectum. He drew attention to the variable position occupied by the tumour and insisted on the importance of routine rectal and bimanual examination, if necessary under an anæsthetic, as aids in coming to a prompt diagnosis. The time which elapsed before operation in his cases varied from five hours to three weeks; and though there was no direct relation between this and ease of [illegible] lation

[illegible]

any way affected by inflation or irrigation.

by laparotomy, carried out with all possible speed through an incision usually in the right semilunar line and this was aided

[illegible] ger in the rectum which [illegible] into the descending colon. [illegible] of these were fatal; in one an artificial anus was formed and in all the others resection was performed and the ends of the bowel were united, in one by Maunsell's method and in the other three by simple end-to-end anastomosis with two rows of sutures, the inner passing through all the coats and the outer through the muscular and peritoneal coats. In another fatal case in which the invagination was reducible no surgeon had been called in for 24 hours and though reduction was easy the patient, a boy, nine years old, died on the fourth day. Of the 18 cases seven died, giving a mortality of 39 per cent.: of the reducible cases (13 in all) two died, a mortality of 15·4 per cent.; in the 14 cases under one year the mortality was 21·4 per cent., or, excluding the two which were irreducible, there was only one death, giving a mortality of 8·3 per cent. In all th [illegible] had elapsed between the [illegible] and the operation. A table of the cases [illegible]

Mr. A. E. J. BARKER remarked on the large number of double intussusceptions recorded in the papers. He had never seen a case of this nature, although he had operated on between 25 and 30 cases. He agreed with Mr. Fagge that escape of the bowel from the abdomen at the time of operation was a most undesirable complication. He differed from both Mr. Wallace and Mr. Fagge as to the length of incision necessary and it was rarely advisable, he thought, to make one over two inches long. He attributed the cases just described of bursting open of the wound to this factor, as he had never seen such an occurrence in his cases. In this connexion he believed it was important to conduct the first dressing under opium and chloroform. Some cases incurred toxæmia after the operation; it was probably explained by intestinal sepsis in and around the injury. He had several times noted a rise of temperature on the following day to 105° F., and even to 107°, there being no diarrhœa, distension, or other symptom. He had never seen recovery after resection in gangrenous cases and never expected to see it. The only hope lay in early operation.

Dr. C. R. BOX upheld the custom of admitting all acute abdominal cases first under a physician and advocated the administration of chloroform for diagnostic purposes. He discussed the diagnosis and mentioned a case of Riedel's lobe of the liver, thought to be of congenital origin, which gave rise to difficulty. In regard to treatment, inflation was a bad method; early operation was the best measure. He considered that the occasional bursting open of the wound resulted from non-union due to toxæmia and instanced the analogous cases of non-union after operation on perforated typhoid ulcers.

Mr. DOUGLAS DREW had operated on 13 cases. Two gangrenous cases died and one, who had a temperature of 106° F. on the following day, died from toxæmia. This case was one of double intussusception, the only one he had ever seen. He, like Mr. Barker, reduced within the abdomen but always withdrew the cæcum so as to examine it. He had never seen a wound burst open.

Mr. W. H. B. BROOK (Lincoln) asked whether inflation was ever justifiable. He had performed it with success. He also would like to know what treatment was recommended for the irreducible cases, whether splitting of the outer layer or resection.

[illegible] remarked on the possible causes of

Mr. [illegible]

the to [illegible]

from t [illegible]

Could [illegible]

peritoneal [illegible]

Mr. JAMES BERRY had seen 40 or 50 cases [illegible] He had never heard of a successful resection under the age of two years and asked whether anyone else had. It was correct, therefore, to use force in persisting in the attempt to re [illegible]

Mr [illegible] had met with several cases [illegible]

tion [illegible]

T [illegible]

trea [illegible]

intuss [illegible]

Mr. WALLACE, in reply, said that he was convinced [illegible] bursting open of wounds was not due to long incisions, as it occurred when these were only one inch long. He thought that inflation should never be done, as no one could ever tell

whether complete reduction had taken place; the disappearance of the tumour might only mean that the intussusception was tucked away behind a flexure or under the liver. He, like Mr. Berry, had never heard of a case of successful resection under the age of two years, so that forcible manipulation was the only thing to do.

Mr. FAGGE, in reply, thought that double intussusceptions were often missed but as laparotomy was always indicated their importance need not be insisted on. He had never made an incision under three inches long, even in a small child. He had only seen one case of recurrence after operation but many after inflation.

OBSTETRICAL SOCIETY OF LONDON.

Abdominal Gestation.—Supravaginal Hysterectomy versus Panhysterectomy for Fibroids.—Vaginal Drainage Tube.

A MEETING of this society was held on Dec. 7th, Sir WILLIAM JAPP SINCLAIR, Vice-President, being in the chair.

Lieutenant-Colonel A. J. STURMER, I.M.S., forwarded a short communication on a case of Abdominal Gestation which had been under his care in the Madras Government Maternity Hospital and the parts removed were shown. When the patient first came under observation the periods had ceased for five or six months. There was no sign of fœtal life and the abdominal swelling seemed to decrease in size during the four weeks when she was under observation. At the operation a female fœtus, weighing 2 pounds 6 ounces, was removed. Part of the placenta was separated without much difficulty from omentum and intestines but in attempting to separate the lower attachments free bleeding was caused. It was found that the fundus of the uterus had come away with the placenta and as the bleeding could not be otherwise controlled supravaginal hysterectomy was performed, both appendages being removed at the same time. The tubes appeared to be macroscopically intact and there was no history of any such occurrence as a rupture, but pending further investigation no opinion was offered as to whether the condition was primary or secondary.—Dr. C. J. CULLINGWORTH and Dr. AMAND J. M. ROUTH referred to cases which showed that the Fallopian tube might, by virtue of the remarkable properties of unstriped muscle, resume its normal dimensions and appearance very quickly after the escape of an ovum from within it.—On the motion of Dr. CULLINGWORTH the specimen was referred to the pathological committee.

Dr. WALTER W. H. TATE related three cases of Intestinal Obstruction following Operations for Fibroid Tumour of the Uterus, with special reference to the choice of operation. The first case was that of a single woman, aged 23 years, who had suffered from menorrhagia for 12 months, with gradual enlargement of the abdomen. The tumour reached to one inch above the umbilicus. Myomectomy was performed on May 6th, 1902. There was no trouble till two days after operation, when vomiting commenced. On the 9th the pain and vomiting became worse; there was no result from aperients. At 10 P.M. the abdomen was reopened and a knuckle of bowel was found adherent to the scar at the back of the uterus. The bowels were well opened on the next day, followed by uninterrupted recovery. The second case was that of a single woman, aged 46 years, with a history of menorrhagia for seven years, especially severe during the last 12 months. A solid tumour was discovered reaching halfway up to the umbilicus. On Dec. 18th supravaginal hysterectomy was performed. Good progress was made during the first week. On the eighth day after operation the temperature began to rise and the patient complained of pain. On the ninth day some distension appeared and aperients failed to act and sickness began. Sickness continued and the pulse-rate increased to 140, distension also increased, and on Dec. 28th the abdomen was reopened. Several coils of bowel were found adherent to the stump and some serous exudation was found tracking up towards the left lumbar region. Convalescence was protracted but ultimately a good recovery was made. The third case was that of a young married woman, aged 22 years, who was delivered of her first child on March 10th, 1904. There was some fever on the sixth day of the puerperium and a tender swelling was discovered n the hypogastrium. Three weeks later a second swelling was discovered in the right iliac region. The physical signs rather suggested dermoid disease of both ovaries. On April 14th supravaginal hysterectomy was performed. The patient got on well and her bowels acted well on the morning of the 17th. The same evening the patient had abdominal pain and began to vomit. The pulse-rate rapidly increased, she looked pinched and ill, vomiting continued, and aperients and enemata entirely failed. At 5 P.M. on the 18th the abdomen was reopened. A knuckle of bowel constricted by a band of omentum was found firmly adherent to the stump. The band of omentum was separated and ligatured. The bowels acted on the next day and the patient made a good recovery. Supravaginal hysterectomy had been the operation selected by Dr. Tate in nearly all cases of fibroids up to the last few months. The occurrence of three cases of obstruction in a series of 150 operations called for serious reflection. It appeared to Dr. Tate that dangerous adhesions of bowel were more likely to follow supravaginal hysterectomy than panhysterectomy. The immediate risk of the two operations in the large bulk of cases was equal, though in a few special cases the complete extirpation might expose the patient to greater risk at the time of operating. There was no advantage to be gained by leaving the cervix and in some cases the presence of the cervix might give rise to troublesome complications. The possible danger to the ureters was not an argument against the operation of panhysterectomy, as the risk of injuring them was to a great extent imaginary, and these structures ought not to be damaged when proper care was taken.—Mr. ALBAN DORAN considered that the flaps of the uterine stump should be closed by a continuous suture to avoid increase of the number of knots, the most unfavourable feature in supravaginal hysterectomy. An enema as well as purgatives should be given on the second day. In his own practice one case of obstruction, which he related, had occurred in 98 supravaginal hysterectomies. In respect to the danger of obstruction the Abel-Zweifel theory that a portion of the uterus above the os internum should be saved as well as the ovaries was of importance, as it seemed to lessen the risk of psychical disturbance. It involved, however, a large stump which increased the chances of intestinal obstruction. This uncertainty as to remote physiological effects was an objection to panhysterectomy. Besides, the sutured flaps of peritoneum deep in the pelvis might cause obstruction. Von Winckel recently related a case where a large vaginal hernia developed, so that the patient complained that she often sat on her bowels—an eminent instance of a bad intestinal complication.—Dr. PETER HORROCKS considered that panhysterectomy for fibroids was more difficult to perform, was followed by greater shock, had a higher mortality, and left the pelvic floor in a weaker state than supravaginal hysterectomy. He thought that of the three cases reported by Dr. Tate two should be left out of consideration on the ground that one being a case of myomectomy and the other being associated with subinvolution after delivery, adhesions were specially likely to occur and obstruction to ensue. One case of obstruction in 150 supravaginal operations was about the average and that was his own experience. He considered that a continuous suture was better than an interrupted one for the peritoneum covering the stump; in his own practice he used fine silk.—Dr. A. L. GALABIN did not consider Dr. Tate's contention proved by the evidence adduced. He thought that the method of doing the operation might make a difference. He made no flaps but cut across at the narrowest point, about the level of the internal os. If, however, fibroids involved the cervix so that he could not get below them he always chose panhysterectomy. He adopted rather an elaborate suture, but thought that it was worth the increased time occupied, as he had never had a case of intestinal obstruction after supravaginal hysterectomy, panhysterectomy, or vaginal hysterectomy. He first closed the broad ligaments by uniting their anterior and posterior faces with sutures at the site of the round ligaments and the uterine arteries. He then united the peritoneum in a transverse line, getting a sero-fibrous union by piercing the anterior peritoneum twice and using a continuous suture of fine silk. The stump was dealt with by stitching the edge of the peritoneum left above the bladder in stripping it down and was mainly covered by bladder and could come in contact with intestines only at its posterior edge. In panhysterectomy he united the peritoneum in precisely the same way. Similarly, in vaginal hysterectomy he preferred to

stitch the peritoneum so as to fix the pedicles of the broad ligament in the vagina In two cases in which he had had occasion to reopen the abdomen within two or three years after supravaginal hysterectomy the line of suture was observed to be free and smooth and no trace of the silk was discoverable — Dr HERBERT R SPENCER said that he had relinquished the operation of supravaginal hysterectomy in favour of total [illegible] had called attention [illegible] intestinal obstruction [illegible] and published a case of his own On several occasions during the last ten years he had referred to the risk of septic peritonitis from infection of the cervical stitches long after the operation Moreover, not uncommonly cases were met with in which pus was discharged per vaginam after the operation Hæmorrhage from, and the development of malignant disease in, the stump were other possible disadvantages The lists of picked cases published produced a false impression of the advantages of supravaginal hysterectomy The cases required following up and the later results recording before a correct estimate could be reached Prolapse after total removal he regarded as a bogey and not more likely to occur when done for fibroids than after a similar operation for cancer, Personally he had never seen a case For uniting the peritoneum he preferred a purse string suture He adopted the practice of leaving salt solution in the abdomen—he thought that it tended to prevent the occurrence of adhesions —Mrs BOYD questioned whether Dr Bates's second case should be regarded as a case of typical mechanical obstruction and thought it rather a condition of peritonitis with secondary matting of bowel —Dr CULLINGWORTH stated that he had performed Baer's operation very nearly 100 times and had had four undoubted cases of genuine intestinal obstruction but in no case was it noted that the intestine had become adherent to the line of suture on the uterine stump In regard to the relative merits of supravaginal hysterectomy and so called panhysterectomy he had an open mind He had had little if any personal experience of panhysterectomy so that he had no means of comparing the one with the other in his own practice But so far as the mortality statistics put forth by C P Noble and by Olshausen showed, total extirpation was attended with a higher mortality and most operators were agreed that total extirpation involved a longer operation He could not subscribe to Dr Bates's opinion that the simple transverse wound left after the operation at the bottom of the pelvis afforded little or no risk of dangerous intestinal adhesion, for he h results in two cases after He thought that Dr Bate w for total hysterectomy on very slender grounds if his conversion really rested on the evidence brought forward in his paper —Dr A H N LEWERS had met with two cases only of intestinal obstruction after abdominal section In both cases supravaginal hysterectomy had been performed In one of these cases a coil of small intestine had become adherent to the scar over the stump across the floor of the pelvis In the other obstruction was due to a coil of intestine slipping [illegible]

moderate number of panhysterectomies for fibroids but the operation took longer than, and to his mind presented no advantage over, the supravaginal operation —Dr TAPP replied

Sir WILLIAM SINCLAIR showed Tube which he had devised to o arising from the omentum being the openings It was furnished holes and was so shaped as to be self retaining —Dr LEWERS and Dr GALABIN were both satisfied with the results obtained by employing a strip of gauze in those rare cases where it became advisable to drain into the vagina by opening the pouch of Douglas

OPHTHALMOLOGICAL SOCIETY

Exhibition of Cases and Specimens

A CLINICAL meeting of this society was held on Dec 8th, Mr JOHN TWEEDY the President, being in the chair

The following were among the demonstrations given —

Mr E HARRIES JONES showed a patient whom he had had under treatment since June 1st 1901, whose vision in the right eye was this $\frac{6}{9}$ Proptosis developed and in August the vision was barely $\frac{1}{18}$ The orbit was explored and a soft rounded mass was felt in the region of the optic nerve On Nov 12th the vision was $\frac{6}{9}$, but by Dec 8th it had improved to $\frac{6}{6}$ Potassium iodide was given till Oct 1st and the fields had always been full In September there was some slight exudation on the papilla with striate hæmorrhages at the edge of the disc, all of which became absorbed There was no history of venereal disease

Mr G WINFIELD ROLL showed a male infant, aged 14 months with marked Proptosis of each Eye without pulsation There was lateral nystagmus and the child was apparently blind The discs were atrophied but the vessels were about normal in size, in the right eye were patches of choroiditis The child was mentally deficient but could sit up unaided The testicles were undescended There was abundant mucous discharge from the nares but otherwise he appeared to be healthy The family history was not obtainable

Mr C DIVERLUX MARSHALL showed a well marked case of Posterior Lenticonus in a woman aged 23 years The vision in this eye was $\frac{6}{36}$ and in the other eye it was $\frac{6}{9}$

Mr G W THOMPSON and Mr EDGAR CHATTERTON showed some sections of a Cyst of Krause's Gland The patient from whom it was removed was 25 years of age and when 13 years of age had her lid cut accidentally, the mass had been growing since then and had reached the size of a small pigeon's egg

Mr GEORGE COATS showed two sisters exhibiting similar Abnormalities in the Branching of the Retinal Vessels A third sister had minor peculiarities

Mr JESSIE J PATON showed a patient suffering from Endothelioma of the Orbit sections of which had been shown at the last meeting of the society The patient, a female, aged 38 years was first seen in May last, when there was slight lateral proptosis of the right eye, her vision was $\frac{6}{9}$ and the fundus was normal Mercury and iodide produced no effect An attempt was made to remove the growth without the eyeball and this was done on Sept 20th, but it was found to extend to the posterior angle of the orbit Its speedy recurrence as well as its microscopical appearance, showed it to be an endothelioma Mr Paton also showed another patient upon whom he had operated for Symblepharon The mucous membranes of three frogs' mouths were used to cover a large area in the lower conjunctival cul de sac The condition was produced by orbital cellulitis During the year that had elapsed since the operation there had been practically no shrinking

Mr A STANFORD MORTON exhibited a man aged 23 years, who had suffered from Recurrent Hæmorrhages into the Vitreous since which new vessels had developed in the vitreous

EDINBURGH MEDICO CHIRURGICAL SOCIETY

Toilet of the Anus —Varying Form of the Stomach —Exhibition of Specimens

A MEETING of this society was held on Dec 7th Professor [illegible] the President being in the chair

MILLER read a communication entitled [illegible] of the Anus He drew attention first to [illegible] carrying infection to the various parts of the body by the hands and clothes from an insufficiently cleansed anus He then described a simple method of cleansing the anus He pointed out that any method of cleansing the anus [illegible] that, therefore, careful and thorough cleansing of the hands and especially of the nails was necessary also Mr Miller drew attention to one or two affections probably due to want of proper cleanliness as pruritus ani abscess, fissure, and piles [illegible] the use of injections of a [illegible] he was in the habit of [illegible] a box containing a sponge for the purpose of washing the anus. He had found that patients obtained marked benefit

in pruritus ani from the injection into the rectum each night of a wineglassful of warm thin starch to which had been added two drachms of liquor bismuthi. This was retained during the night and was markedly soothing in effect.—Dr. J. O. AFFLECK referred to the fact that nurses were not in the habit of cleansing the anus of patients thoroughly and said that this was especially important in cases of typhoid fever or cholera.—Dr. W. TAYLOR described a douching apparatus which could be easily fixed to the water-closet.—Dr. H. M. CHURCH referred to the necessity of thoroughly cleansing the nozzle of the enema syringe.

Professor D. J. CUNNINGHAM gave a description of the Varying Form of the Stomach and illustrated it with a number of beautiful lantern slides. He discussed, confirmed, and to some extent supplemented the recent observations of the late Professor His on the form of the stomach. He next proceeded to describe certain physiological conditions of the stomach which were now not infrequently seen in formalin-hardened subjects and he endeavoured to show that these apparently temporary forms in some measure coincided with Mr. Cannon's observations on the movements of the stomach in the cat when studied by the aid of the x rays. Professor Cunningham next touched upon the question of hour-glass contraction of the stomach and supported the views of Mr. B. G. A. Moynihan on this subject.—The paper received a lengthy discussion which was taken part in by Dr. W. G. BLACK, Mr. H. J. STILES, Mr. H. ALEXIS THOMSON, Dr. H. HARVEY LITTLEJOHN, Mr. F. M. CAIRD, Dr. JAMES RITCHIE, Dr. AFFLECK, Professor W. S. GREENFIELD, Dr. GEORGE HUNTER, Dr. D. WATERSTON, Dr. HARRY RAINY, and Dr. G. LOVELL GULLAND. The general opinion seemed to be that the appearances found in the dissecting room did not at all coincide with the condition of the stomach during life.—A cordial vote of thanks was awarded to Professor Cunningham for his interesting demonstration.

Dr. T. M. BURN-MURDOCH and Dr. STUART MACDONALD showed a specimen of Biliary Cirrhosis from a young child.

Mr. A. A. SCOT SKIRVING exhibited (1) a Simple Form of Coin-catcher; (2) old Stereoscopic Photographs of cases operated upon by Professor James Syme, Professor James Spence, and others; and (3) a specimen of Congenital Syphilitic Disease of the Knee-joint.

Mr. A. MILES exhibited (1) a Kidney removed for Pyonephrosis due to a Calculus impacted in the Pelvis; (2) a Kidney removed for Hydronephrosis due to a Calculus impacted at the Lower End of the Ureter; (3) Kidneys removed for Tuberculous Disease; and (4) Renal Calculus removed from the Calyx of the Kidney.

Mr. CAIRD demonstrated a Luys Urine Separator with examples of urine obtained from each kidney.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Yellow Atrophy of the Liver.—Glioma of the Retina.—Myelæmia.

A MEETING of this section was held on Nov. 25th, Dr. H. C. EARL, the President, being in the chair.

Dr. W. J. THOMPSON described a case of Acute Yellow Atrophy of the Liver. He said that the patient was admitted to Jervis-street Hospital, Dublin, on August 24th, 1904, a few weeks after her confinement. She had been suffering from jaundice for one week. She was 27 years of age, had been married six years, and had three children; her family and personal histories were good; she lived a hard life and resided in a tenement house in a congested part of the city. On admission the case seemed to be an ordinary catarrhal one; there were no enlargements of the liver, all the organs were normal, and the urine contained a slight trace of albumin. She seemed to improve during the first week but became worse in the second week. Nausea was almost constant and there were severe spasmodic pains in the liver. During the third week the liver dulness greatly diminished. Leucin and tyrosin were detected in the urine and at the same time the urea was diminished. At the end of the third week severe nervous and cerebral symptoms developed and she died three days afterwards, four and a half weeks after the first sign of jaundice. At the post-mortem examination the liver was found to be small and soft and only weighed 29 ounces. All the abdominal organs were in a healthy condition, save for a small ovarian cyst. The clinical points of interest were (1) the protracted duration of the attack—namely, four and a half weeks; (2) the spasmodic agonising pains in the liver; and (3) the absence of hæmorrhagic manifestations.—Professor E. J. MCWEENEY then described the character of the specimen as follows. The liver weighed 29 ounces; it was small, very soft, and pulpy; the capsule was wrinkled and pale red with yellowish mottlings. A section, which was mostly reddish with bright yellow patches, showed that the lobular marking was obliterated. The dimensions of the right lobe were six inches from side to side, five and a half inches from before backwards, and one and five-eighths inches in thickness. The left lobe was at most only half an inch thick. The gall-bladder was normal. The microscopic examination was made by means of teased preparations, frozen, and paraffin sections. It showed (1) complete necrosis of the liver cells; (2) patches of round-cell infiltration, which still preserved their nuclear staining; (3) patchy pigmentation of the liver cells with yellow granular matter which did not give an iron reaction (bile); (4) moderate fatty degeneration; and (5) the presence of minute, yellowish-brown globular concretions in groups and rows. These were very abundant in the tissue and varied from 12 μ to 30 μ in diameter. Some of them seemed radially cleft, others were coated with a prickly layer of minute needle-shaped crystals, whilst others presented obscure concentric striation. There were also minute colourless acicular crystals lying singly and in sheaves. These objects were doubtless crystals of leucin and tyrosin. The globules were soluble in alkalies and weak sulphuric acid; insoluble in ether, alcohol, and chloroform; and partly soluble in water. A few bacilli were present but were mere ordinary putrefactive germs. The generally accepted theory was that the disease was due to toxins.

Mr. J. B. STORY, the PRESIDENT, and Mr. H. C. MOONEY exhibited specimens of Glioma of the Retina.

Professor MCWEENEY described hæmatological observations which he had made on a case of Myelæmia. The patient was a man, aged 41 years, who had been an inmate of Mullingar District Asylum for the past six years, suffering from paranoia with hallucinations and delusions. After four years of good bodily health he began to lose weight and became unable to work. A large abdominal tumour was then discovered and was recognised to be the hugely enlarged spleen. Blood counts yielded 2,680,000 red corpuscles and 450,000 white corpuscles per cubic millimetre respectively. Despite rest in bed, good food, and plenty of fresh air he became steadily weaker. There was slight fever. Anæmic symptoms were never prominent, and hæmorrhages did not supervene till a few days before death, when he suffered from epistaxis and hæmorrhagic effusion into the subcutaneous tissue of the right thorax. The duration of the case from the discovery of the splenic tumour was 14 months. The necropsy revealed an enormous enlargement of the spleen, which weighed 145 ounces, was firm, dark red and homogeneous on section, and presented no hæmorrhages, infarcts, or whitish infiltrations. The marrow of the long bones was pink, fleshy, vascular, and completely altered from its normal fatty state. The superficial lymph glands were not enlarged. Of the internal ones the bronchial, omental, mesenteric, and cœliac glands were slightly enlarged. There was slight obsolete tubercle in the apices of both lungs. The liver weighed 138 ounces but showed no macroscopic change beyond slight nutmeg discoloration and marked hyperæmia. There was no leukæmic infiltration in any of the organs. Blood films taken shortly before death showed: polymorphic cells, 35 per cent.; myelocytes, 45 per cent.; transitional forms, 3·5 per cent.; small lymphocytes, 2 per cent.; and eosinophiles, 14·5 per cent. A certain number of mast cells were seen and polymorphic cells with mitotic nuclei were readily found in the peripheral blood. Marrow films revealed giant cells, myelocytes, eosinophiles, large and small hyaline mononuclear cells, and normoblasts in varying proportions.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. C. D. Fitch, the President, being in the chair.—Mr. J. Lionel Stretton showed several cases and specimens, amongst which were the following. 1. A woman, aged 30 years, from whom he had removed a Malignant Stricture of the Sigmoid Flexure. The portion of intestine removed was about five inches long; the junction was made by simple suture. She made

a perfect recovery and was discharged in three weeks, she now suffered no discomfort 2 A Cæcum and Appendix with about one foot of Ileum removed from a woman, aged 51 years. There had evidently been an intussusception some years previously and the portion of intestine involved had become malignant The calibre of the gut was not more than one eighth of an inch The junction was made with catgut sutures 3 A woman, aged 75 years, whom he had operated on for Double Cataract at one sitting with satisfactory result Mr Stretton said that he had had 15 cases of Appendicitis under his care within two months and four on one day, of these cases 12 had been operated on and three patients had refused operation All those operated on recovered, though one seemed hopeless and one of the others was exceedingly ill The worst case was that of a boy, aged ten years, who was admitted with general peritonitis He had suffered from previous attacks The present one had lasted one week The abdomen was swollen, hard, and tympanitic The patient was very ill, there were constant vomiting and a running pulse An incision was made in the mid line Half a pint of fœtid pus was evacuated and a fæcal concretion The discharge continued for a week and then became fæcal There was very little action per anum This continued for three weeks and then gradually subsided and the wound healed The patient had now put on flesh and appeared to be quite well Another boy, aged ten years, was admitted with peritonitis following an attack of two days duration The patient was very ill, there was constant vomiting and his pulse was 120 An incision was made in the usual situation, a quantity of thin sero pus escaped The appendix presented and was easily removed a gauze drain was inserted and the wound was closed Ten days later he became suddenly worse, with vomiting and a distended abdomen The track of the gauze drain which had been removed three days after operation, showing no discharge, had healed This was reopened with sinus forceps and about half a pint of pus was evacuated, since when the patient had gone on uninterruptedly well Four more cases had special points of interest The first was that of a man aged 58 years who was admitted with a history of 14 days constipation following sudden pain in the right iliac region, where a globular mass, of about the size of a cricket ball could be felt Symptoms did not indicate appendical trouble but an exploratory incision disclosed a large abscess behind the cæcum, the discharge became fæcal in two days and had now nearly ceased The second case was that of a boy, aged seven years who was admitted with a history of an attack of appendicitis during the previous week The appendix was found to be curled up with the tip adherent near the base, about half an inch from the tip it was closely adherent to the omentum and on separating this a small abscess was discovered containing half a drachm of pus con [illegible] the appendix through a slough removed and the patient made [illegible] there being no rise of temperature A fortnight later a lump appeared below the right costal margin which proved to be a large subphrenic abscess The third case was that of a man aged 35 years He had had two attacks the last occurring about a week previously He had fully recovered and was able to walk from the station to the hospital a distance of about one and half miles The temperature was subnormal There were no symptoms, yet on operating an abscess was opened containing an ounce of pus and the appendix was so rotten that it tore in two The fourth case was that of a woman, aged 38 years, who had, in addition to appendicitis, 79 gall stones. Both conditions were diagnosed before and both were removed at the time of operation—Mr Stretton also showed A Phosphatic Vesical Calculus weighing 222 grains, a Prostate Gland weighing three ounces together with a small Mulberry Calculus removed from a man aged 73 years, 45 Gall stones removed from a woman aged 67 years, 75 Gall stones removed from a woman aged 38 years, and a large Gall stone, weighing 145 grains removed from a woman, aged 54 years—Dr Evans showed a boy, aged six months, on whom he had operated for radical cure of Umbilical Hernia with satisfactory result—Dr B Addenbrooke showed a Uterus containing a Sloughing Fibroid which he had removed through the abdomen The patient had had backache and offensive discharge for five years Shewas making a good recovery from the operation

BRITISH GYNÆCOLOGICAL SOCIETY—At a meeting of this society held on Dec 8th, Professor J W Taylor, the President, being in the chair Dr H Macnaughton-Jones showed an Alveolar Carcinoma of the Fallopian Tube and alluded to the 53 cases recently tabulated by Mr Alban Doran most of which were papillomatous the uterus being affected in six only Neither the uterus nor the ovary was involved in the present case—The President showed two Fallopian Tubes removed at a Third Cæsarean Section after being ligatured twice in previous operations He also showed three specimens of Cancer of the Body of the Uterus the first a simple one the second complicated by a large ovarian tumour apparently malignant, and the third a malignant adenoma invading a myomatous uterus The inadequacy of ligature to prevent conception was, he said now fully recognised The better way was to remove the tubes with their insertions into the uterus by wedge shaped incisions in the cornua He also showed an enormous Ovarian Abscess which had extended up to the umbilicus and had been tapped by the vagina three months previously by another consultant It was firmly adherent to the pouch of Douglas at the seat of the puncture Vaginal drainage was resorted to and a good recovery ensued The pus gave a pure culture of the bacillus coli but no adhesion or channel of communication with the bowel could be detected at the operation—Dr William Alexander read a paper on Adenoma of the Endometrium illustrated by microscopical sections, photographs, and lantern slides He reported five cases in which, with good results to the patients the uterus was removed on account of recurrent hæmorrhage resisting all forms of treatment, including [illegible] e enough to be [illegible] and invalidism [illegible] and shape and, [illegible] the curettings had no pathological features The uterine cavity, however, in all cases presented a very definite and uniform appearance a thick semi gelatinous, semi fibrous membrane running into folds or polypoid masses affecting the whole of the mucous membrane of the cavity and of the uterine end of the Fallopian tube it was described by Dr F Griffith of the Thompson Yates laboratory, as adenoma of the endometrium—Dr Macnaughton-Jones reminded the society that he had exhibited two cases of glandular hyperplastic endometritis in which the adenomatous change described by Dr Alexander had been present—Mr F Bowreman Jessett said that he had seen similar cases and was certain that the gelatinous alteration in the mucosa was a precancerous condition which in time would develop into malignant disease It was seldom that hysterectomy was justifiable when the scrapings of the curette did not show malignancy, but he had known cases pronounced to be benign on such evidence afterwards prove to be malignant—Dr C H F Routh condemned the removal of the uterus [illegible] said that it was only when such treatment failed that hysterectomy should be considered—The President questioned whether a woman was in a much better condition after the introduction of a red hot iron into her womb than after hysterectomy The late Mr Lawson Tait, however had used the actual cautery extensively and with good results—Dr Alexander in reply, said that in his experience the disease was not malignant In one patient after 18 years there was apparently no more growth than at first, another after 20 years of hæmorrhage was still alive waiting for the menopause and hardly worse than many years ago Hysterectomy was not performed till other means had been fairly tried and had failed, and the removal of a uterus that was not only useless but a source of weakness need not nowadays be termed heroic, it was in the cases a simple and safe operation for a very grave disease He always removed the uterus by the vagina and left the ovaries—Dr R T Smith showed a Tubal Sac containing a Fœtus with its head towards the uterus which in its structural completeness was a remarkably interesting specimen of ectopic gestation, the more so as the diagnosis had depended almost entirely on the physical signs, the patient a Polish woman knowing but little English—Dr Bedford Fenwick showed a Degenerated Fibroid Tumour which was referred for a pathological report

THERAPEUTICAL SOCIETY—A meeting of this society was held on Nov 22nd, Sir Lauder Brunton presiding—The Secretary read a paper by Dr J Gordon Sharp of Leeds on Strychnos Toxifera and other Paralysers of Motor

Nerve Endings. Dr. Sharp, who was unable to attend, stated that many had endeavoured in vain to discover the plant that produced curare till in 1902 Mr. J. Quelch brought to Dr. Sharp some poisoned arrows and specimens of the plant given to him by an Indian chief of Guiana. The plant was proved by Mr. E. Holmes to be strychnos toxifera and curarine was found in the bark but not in the leaves. This alkaloid was very deliquescent and easily decomposed but its salts were more stable. Commercial curare contained from 9 to 11 per cent. of the alkaloid. Curare had been used in chorea, in convulsions, and for the prevention of painful spasms in moving wounded persons. He compared its action with that of strychnine, delphocurarine, alstonine, aconite, snake poison, and diphtheria toxin.—The President said that the paper reminded him of that by Majendie on the Upas tree which was strychnos nux vomica. He thought that alstonine might be useful in cases of excessive itching in diabetes and albuminuria.—Dr. Crichton remarked that death from curare in frogs occurred only after 40 hours, while strychnine killed them in two hours.—Mr. G. C. Moor, F.I.C., then read notes on Brandy, showing that the different constituents of brandy could be accurately estimated by chemical analysis, but it was quite possible to prepare a brandy which would answer every analytical standard. Therefore, factories of brandy should be properly inspected by Government as occurred with the Orion brandy of Australia.—The President said that some wines promoted merriment while others caused quarrelsomeness, but it was impossible to say on what this depended and so it might be with different brandies.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting of this society held on Dec. 2nd Dr. E. Law showed a case of Incrustations in the Trachea which had been shown at the previous meeting. The patient suffered from considerable dyspnœa and the question was raised as to whether tracheotomy might not be necessary.—Dr. A. Bronner showed some crusts from a case of dry catarrh of the nose and nasopharynx, which had been treated by formalin spray.—An interesting case of Epithelioma of the Larynx was shown by Sir Felix Semon. Thyrotomy had been performed but was followed by fairly rapid recurrence. Subsequently a great part of the affected half of the larynx was removed and the man made an excellent recovery. The striking part of the case was the extraordinarily good voice left.—An exceedingly rare case of a Bony Growth in the ethmoidal region of the Nose in a girl was shown by Mr. H. Lambert Lack. There were obstruction of the maxillary ostium from the growth and mucocele of the antrum. The diagnosis microscopically suggested was ossifying sarcoma.—Two cases were shown of Tumours in the neighbourhood of the tonsil; one by Dr. Wyatt Wingrave in a female, aged 64 years, and the second by Dr. H. Tilley in a young man. In Dr. Tilley's case there were a large number of enlarged cervical glands, and in both cases the diagnosis was that of lymphosarcoma. In the second case the glands and the enlargement of the tonsil had almost entirely disappeared under the influence of large doses of arsenic.—An interesting case of Chronic Laryngitis in a man, aged 32 years, was shown by Dr. G. C. Cathcart. The general opinion of members was that the condition was one of extreme pachydermia.—Mr. F. J. Steward showed a case of Complete Paralysis of the Left Vocal Cord due to a tumour of the thyroid. The clinical aspects of the tumour were those of non-malignancy, but the case was shown with the view to eliciting opinions as to the question of malignancy.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 23rd, Dr. J. K. Kelly, the President, being in the chair.—Dr. A. W. Russell read notes of a case of Epileptiform Attacks complicating Double Ovarian Tumour and ceasing after removal of the growths which were found to be large ovarian tumours, partly cystic and partly solid. On microscopic examination carcinomatous tissue was found. There had been no return either of the epileptic attacks or of the pathological growth.—Mr. Donald Duff read notes of a case of Uterus Didelphys with Septate Vagina. The patient complained of dysuria and profuse vaginal discharge; menstruation had been normal. Examination showed vaginitis and urethritis. A slight thickening was subsequently found at the left side of the hymen; this contained an opening into a second vaginal canal. On careful palpation after the acute symptoms had subsided it was found that there were two distinct vaginæ of equal length and two cervices, with a distinct intervaginal septum complete from the hymen to between the cervices. The fundus was not felt. The patient some months later had a miscarriage, the pregnancy taking place in the right uterus. The passage of a sound then showed two uteri completely separated. Mr. Duff acknowledged his indebtedness for the case to Dr. G. Balfour Marshall.—Dr. Balfour Marshall read notes of a case in which a patient had worn a vulcanite ring pessary for 15 years. She was aged 60 years and had passed the menopause 26 years previously. She was admitted to the Glasgow Royal Infirmary complaining of dysuria and blood-stained vaginal discharge. The symptoms closely resembled malignant disease. The pessary, which had caused ulceration of the vaginal walls and become imbedded, was removed by cutting through the tissue which surrounded it.

Reviews and Notices of Books.

Studies Contributed to the "Dublin Review" by the late Dr. J. R. Gasquet. With an Introduction by the Right Rev. J. C. HEDLEY, O.S.B., Bishop of Newport. Edited by DOM H. N. BIRT, O.S.B. Westminster: Art and Book Co. 1904. Pp. xi.-349.

IN an interesting volume of Studies contributed by the late Dr. J. R. Gasquet to the *Dublin Review*, now collected and published as a memorial and as a tribute to his ability and wide erudition, there are three papers of considerable interest to medical readers, the remainder of the volume comprising a number of learned and profound studies on subjects connected with Roman Catholic Church history and Apologetics. The three articles deal respectively with hypnotism, the "cures" at Lourdes, and the physiological psychology of St. Thor [illegible] with all of which Dr. Gasquet was [illegible] o deal. The brief sketch of his life appended to the volume shows that after a short period spent in general practice Dr. Gasquet devoted himself to the study and treatment of mental disease, while throughout his life he continued his interest in the studies of philosophical, metaphysical, and theological subjects. He was undoubtedly a man of profound learning, unusually widely read, and a zealous adherent to the Roman Catholic Church. The literary style of these Studies is peculiarly pleasing, clearly expressed in elegant but not pedantic phraseology. They deal with controversial matters with an incisive criticism and a very clear statement of the points at issue.

The essay on Hypnotism, though originally published so long ago as April, 1891, contains a concise and interesting statement of the opposing views of the Salpêtrière and the Nancy schools, to which there is little to add at the present time, while in his discussion of their results Dr. Gasquet shows the paramount importance of suggestion as a factor in the production of many, if not all, of the hypnotic and post-hypnotic phenomena and gives in his general adhesion to the views of the Nancy school which are nowadays usually adopted by most scientific workers in the field of hypnotism. The Salpêtrière school originally taught that hypnotism could only be successfully produced in persons of hysterical temperament and by means of physical agencies producing a monotonous stimulation of the nervous system, while the Nancy school has always maintained that hypnotism is induced by suggestion, that the physical agencies so frequently utilised in its production act by putting the subject into a state of expectancy and attention, and that healthy persons are more readily influenced, hysteria being an obstacle to successful hypnotism rather than an essential. Dr. Gasquet points out that whichever view be adopted an explanation is needed which shall connect hypnotic phenomena with the more usual incidents of mental life, and he gives a brief statement of Professor Heidenhain's hypothesis that the highest cerebral centres are temporarily exhausted

by the monotonous stimuli used in producing hypnosis and thus prevented from exerting their normal inhibiting and controlling functions, and therefore suggestions from outside are the more readily acted on uncontrolled. He then discusses the dangers of hypnotism, more especially as a result of post-hypnotic suggestion, or *suggestions à longue échéance*, and gives again the rival views of the two schools—that of the Salpetrière school that the moral sense would prevent the performance of crime in the hypnotic state in an otherwise normal person, and the opposing view of the Nancy school that criminal suggestions would be acted upon in the same manner as the ordinary suggestions are. Dr. Gasquet's views are so well thought out and so temperate that they may with advantage be quoted: "Perhaps we shall do best to suspend our judgment and meanwhile to hold that at any rate only a very small proportion of hypnotised subjects lose all power of resistance. It is unfortunate there should be this conflict of opinion concerning the most important practical question of all. ..... At first sight the dangers of hypnotism seem so great that the temptation is to exaggerate them, but further consideration reduces them to human proportions and teaches us they may be controlled."

The essay on the "cures" at Lourdes is an impartial and critical examination of the evidence available both in the records of the Bureau de Constatations Médicales and that obtained by personal investigation at Lourdes, and contains suggestions for the scientific scrutiny of alleged cures. Dr. Gasquet naturally wished to believe in the miraculous nature of some of these but there is no trace of bias in his statement or discussion of the matter. He spent the month of May of the year 1894 at Lourdes in order to examine personally the records and to observe such pilgrims as might come to the shrine, and for his inquiries he was given every facility by the officials, notably by the medical officer, Dr. Boissarie, of whose ability, acumen, and character he wrote in the highest possible terms. Dr. Gasquet confessed that before his visit to Lourdes he was suspicious that Dr. Boissarie in his book[1] might have unconsciously been led by religious enthusiasm to exaggerate but found that these suspicions were at once disarmed upon personal acquaintance with the man whom he then regarded as unquestionably sincere. Dr. Gasquet's account of his observations at Lourdes is the most interesting part of his essay. He was much impressed by the absence of any attempt to excite the pilgrims and also by the lack of any manifestations of hysterical outbursts or of hypnotic phenomena, for both of which he was keenly on the watch. He observed decided improvement and often complete recovery in a majority of cases that came for examination after visiting the shrine and, excluding a few special cases, the improvement was not more than could conceivably be produced by the action of the mind on the body. These ordinary cases he divided into two classes: firstly, the neurotic pure and simple—such as cases of hysterical paraplegia and paralysis; and secondly, those with organic disease in whom the general condition was improved without direct effect upon the organic lesion. But, excluding these, there remained the few special cases in which the improvement was so striking as to be apparently miraculous, and it is such cases which Dr. Gasquet thought sufficient to justify careful inquiry on the part of all who might be interested and could spare the time to visit Lourdes. He quotes certain of these cases which, if the records are to be relied upon, are certainly wonderful, but the details in each are not full and all the requisite conditions for conviction seem not to be present in any one case. In fact, as Dr. Gasquet himself writes, "One of the hardest lessons that we all learn in life is not to trust to the fairest appearances without careful and personal examination"; and probably there are few who would be convinced without personal examination of the supposed cure, both before and after visiting the shrine.

The last essay in the volume is that on the Physiological Psychology of St. Thomas Aquinas and comprises a statement of the more important conclusions of that remarkable man and profound philosopher and in it Dr. Gasquet proceeds to demonstrate that the psychology of Aristotle as stated by St. Thomas is in substantial accord with the conclusions of modern science, the main conclusions of which it has in many instances completely anticipated. It was a fundamental feature of the Thomist philosophy that sensorial always accompanied intellectual activity and this coincides with the modern conception of psycho-physic parallelism, that the intellectual functions are the expression of change in the higher cerebral centres. Again, St. Thomas affirmed very strongly that the passions (love, fear, hatred, anger, and the like) are affections of the body as well as the mind—a view also taught by Aristotle—and Dr. Gasquet states that Spinoza's account of the passions is a fragmentary echo of the Thomist description; derived from Descartes. Again, another anticipation of modern ideas is the teaching of "internal senses"—viz., that sensory impressions are in all the higher animals and man further elaborated by a series of mental processes associated with the activity of nerve centres. In this connexion it is of interest to note that both the great masters whom St. Thomas followed, Aristotle and Albertus Magnus, under the latter of whom he studied at Cologne, were ardent students of natural history, dissecting many animals to pursue their studies, and thus, although St. Thomas has been described as the "spirit of scholasticism incarnate," we find him far in advance in his conclusions of so many of his successors who adopted the purely introspective method of studying cerebral activities.

[1] Lourdes: Histoire Médicale. Paris: Lecoffre, 1891.

The Problem of the Milk-supply. By F. LAWSON DODD, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S. R.C.S. Eng., D.P.H. R.C.P.S. Eng. London: Baillière, Tindall, and Cox. 1904. Pp. 77. Price 1*s.* 6*d.* net.

IN these pages a summary is given of a question the importance of which is becoming daily more apparent. The author says that great care has been taken to avoid overstating the dangers attendant upon the ignorant and unhealthy methods of milk production which at present prevail throughout the country; and yet the chapters on How Milk is Produced and on Milk Transit are sufficient evidence of the inoculation of an almost pure medium with unknown quantities of dirt. The prevailing conditions are hinted at in an apt quotation of a rural wiseacre: "If the Almighty had meant manure to be kept out of the pails he would have put the udder at the other end of the cow." The prevention of milk-borne disease and the bringing of a pure and clean milk-supply within the reach of the poorer classes are the ends aimed at by the author. For the first the better education of the producer, fairer remuneration for the dairy employés, and more capital expenditure on the farm are imperative conditions of progress. To attain the last object there must be such organisation of production and distribution as will effect greater economies and thus counterbalance the increased cost. The author quotes the increasing infantile mortality with the declining birth-rate, the increasing death-rate among males over 35 and among females over 45 years of age, and the case for physical deterioration shown by the Director General of the Army Medical Service in his report on the "physical unfitness of men offering themselves for enlistment." The medical authorities of the army find that nearly 28 per cent. of those who offer themselves have proved unfit for military service. The bulk of the recruits are, of course, drawn from the poorest classes. While there has been a great advance

in the quality of the water- and of the food-supply of the adult population, the supply of food for the very young has deteriorated in quality, in spite of legislation, owing to the flocking of the people to the towns and the decline in the number of breast-fed infants. During the first two years of life the physical foundations are being laid on which the frame is afterwards to be built, and it is for this period of life that there has been a lowering in the quality of the food-supply. A better class of milk under present conditions could only be supplied at a higher cost, an impossible condition where the poor are concerned. For the supply, then, of the poorer classes the author considers that the only possible solution lies in the extension and development of municipal milk-supplies. In connexion with the depôts model farms should be established where the dairy industry could be taught. He says that the municipalities must go further than the institution of mere depôts, they must have the farms under their control in order to insure the best quality of milk. The water-supply has been municipalised because the public health aspect is of such vital importance and from the same standpoint the milk-supply should be municipalised. Such is the contention in this little book which although it contains no new matter yet puts the whole subject clearly before the reader. It may well be read as a careful study of a problem which concerns the whole nation.

A Short Treatise on Antityphoid Inoculation, containing an Exposition of the Principles of the Method and a Summary of the Results achieved by its application. By A. E. WRIGHT, M.D. Dub., late Professor of Pathology, Army Medical School, Netley; Pathologist to St. Mary's Hospital, Paddington. London: Archibald Constable and Co., Limited. 1904. Pp. 75-x. Price 3*s.* 6*d.* net.

THE prophylactic treatment of certain epidemic diseases of bacterial origin, such as cholera, bubonic plague, and typhoid fever, by the injection of "killed" cultivations of their respective specific organisms has been practised during recent years on a comparatively extensive scale, but even now the collection of statistics proceeds slowly and those at present available are insufficient to render the correct interpretation of the results obtained from the inoculation of such bacterial "vaccines," notably in the case of antityphoid inoculation, an easy matter. The appearance therefore of a short treatise on that particular method of antityphoid inoculation for which Dr. A. E. Wright is responsible is the more welcome at this stage, for therein are reprinted, with some additions, three papers published in the pages of the *Practitioner* for January, February, and March of this year, detailing the successive stages of the author's own experiments and researches in connexion with the problem of the production of immunity in the British army against typhoid fever.

The volume consists of four chapters only, together with a short appendix describing the technique employed in the preparation and standardisation of antityphoid "vaccine" and also a complete list of the author's papers dealing with immunisation against bacterial diseases. The first two chapters of the book are devoted to the theoretical considerations and experimental proofs of the principles of protective inoculation, and in this connexion the author particularly emphasises the law relating to the initial negative and subsequent positive phase of the immunity reaction following the injection of the "vaccine," and while pointing out that the existence of the negative phase will serve to explain the occasionally observed increased susceptibility of the inoculated to typhoid fever, details some experiments which indicate the possibility of reducing the duration of, or even entirely eliminating, this negative phase by careful dosage.

The proof of the efficacy of the typhoid "vaccine" employed by Dr. Wright in his inoculations to stimulate the elaboration of the necessary antitropins, although not given in detail, is summarised shortly from the author's various published papers; and in this connexion we could wish that he had described his experiments as well as his results, for an account of the gradual progress of his brilliant work in the field of protective immunisation against bacterial invasion could not fail to be as full of interest to the general reader as it would be of instruction to the younger generation of research workers. The question of the possibility of provoking the effective formation of antibodies by the ingestion of typhoid "vaccine" is touched upon and a few very suggestive experiments are described, although the author does not apparently anticipate that any practical end would be served by this method of inoculation.

The third chapter details the technique of antityphoid inoculation and describes the clinical symptoms following the injection of the "vaccine," and although valuable from a purely practical point of view does not, from the point of view of preventive medicine, possess the attraction of the fourth chapter which deals with the results of antityphoid inoculation as shown by statistics. In dealing with the available returns of the inoculated and the control groups of uninoculated men Dr. Wright is careful to set out the various fallacies and errors that are inseparable from, and tend to vitiate, statistics of this character and by showing how such flaws may best be avoided, eliminated or corrected, provides the reader who is unfamiliar with the manipulation of figures with many useful hints which may readily be applied to the interpretation of statistical results other than those immediately in question. The statistics which Dr. Wright presents to the reader relate to more than 20,000 inoculated men and are contrasted with over four times that number of uninoculated; and by a critical study of the returns in the light of the commentaries appended it is shown that the incidence of the disease is diminished by at least one half as the results of antityphoid inoculation; whilst the case mortality shows a similar diminution in favour of the inoculated.

Whilst we have no desire to enter into the discussion on antityphoid inoculation now engaging the attention of both the medical and the lay press, and which from its present personal tendency threatens to obscure the real issues, we cannot help feeling that it is a matter of congratulation that a method which has been, so to speak, hall-marked by the antityphoid committee of the Royal College of Physicians of London, the professorial staff of the Royal Army Medical College, the medical department of the German army, and the War Office Antityphoid Committee in turn, is once more to be utilised in the British army.

The division of the subject matters into paragraphs and short sections by means of headlines in distinctive type, headlines which frequently are expanded to such a length as to serve as abstracts of the following paragraphs, has apparently prompted the author to dispense with the usual index, a lengthy table of contents being the reader's only aid in his search for particular points. The majority of the charts, too, leave much to be desired with regard to the style in which they have been reproduced.

LIBRARY TABLE.

The Morality of a Crime. By Sir WILLIAM B. DALBY. London: Harrison and Sons. 1904. Pp. 96. Price 1*s.*—Sir William Dalby's little novel might have been more accurately entitled the morality of two crimes, for the book is divided into two parts, each of which has its separate ethical question. In the first part the problem is whether a man has a right to put an end to his life when he knows

that he is doomed to die a lingering and painful death; in the second the problem is whether a man has the right to desert his wife when she is ruining him by her lack of principle. In the guise of a story Sir William Dalby propounds these questions for solution and we believe we are right in guessing that he considers that both suicide and desertion can be justified in circumstances where longer endurance could make n difference to the issue. He is, however, clearer in the first answer than in the second. If a man must die why may he not die before he is broken down by disease, mutilated by operation, and prostrate with months of pain? One of Sir William Dalby's characters asks himself this and decides that he is not called upon by any morality to suffer purposeless agony. So John Flint, the hard-headed and successful barrister, commits suicide when he is doomed by the medical man to perish from cancer. His son, Arthur Flint, has not such a good case. He has to consider if a man is separated from his wife by every thought and instinct, so separated that neither physical nor mental union will ever be again possible, whether he may not be justified in actually deserting her? We think that here Sir William Dalby hesitated. He wished to say that neither party to such a so-called union was benefiting by keeping up further pretences, but having got that far he saw the social awkwardness of such rough readjustment of ill-formed marriages. Anyhow, we do not learn what his views are, but those of all sound sociologists would be on the side of a preservation of the formal tie and against Arthur Flint. Sir William Dalby's subjects are too terrible to make his book anything but sad reading, while the intent to introduce for discussion two social problems of the first importance within the space of so few pages has spoilt the shape and simplicity of his work. But for readers who wish to be made to think he presents grave material for contemplation.

Stanford's Geological Atlas of Great Britain. Based on Reynolds's Geological Atlas. By HORACE B. WOODWARD, F.R.S., F.G.S. London: Edward Stanford. 1904. Pp. x.–139 and 50 plates. Price 12*s.* 6*d.* net.—This is a most interesting volume. It commences with a short account of the geological structure of Great Britain and of the several counties making up that country, together with the geological and other features observable along the chief lines of railway. Then follow the maps most of which deal with one county only, although Surrey and Sussex appear on one plate. There are also 16 plates illustrating the different fossils to be found in the various formations. Anyone who takes this book with him on a holiday will find it add greatly to the interest of his expedition and, above all, he should read it in combination with Lord Avebury's delightful book "The Scenery of England." Most dwellers in London know and love the Weald and its boundaries and a perusal of this atlas and of Lord Avebury's book will give them a very clear insight into the causes which have carved out the Weald and into those to which are due its many beautiful features.

Philip's Handy-Volume Atlas of London. Fourth edition, revised and enlarged. London: George Philip and Son, Limited. 1904. Price 5*s.*—This is an admirable work of reference. It contains a directory, 55 sectional maps on a scale of three inches to the mile, 14 special maps and plans, cab fares, and an index containing some 13,000 references. If the immortal Soapey Sponge were now alive he would certainly replace his "Mogg" by this atlas, for not only could he calculate the cab fare from Kilburn to Piccadilly but he could at a glance see all the streets through which he ought to go. The atlas includes the whole of the county of London, which is such a vast area that we are certain that no one average dweller in London knows one tenth part of it. It stretches from Chislehurst to Muswell Hill and from Snaresbrook to Wimbledon. The maps are very clear and the names of streets can be read without difficulty. Also the book is of a handy size, being only seven and a quarter inches by four inches. It will be equally useful to the Londoner and to the stranger.

Official Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. London: Charles Griffin and Co. 1904. Pp. 288 and index. Price 7*s.* 6*d.*—A handbook of this nature is indispensable for journalists and especially for scientific journalists. It gives an account of all the scientific and learned societies of the kingdom, their objects, officers, dates of meetings, and in most cases of their publications or of papers read during their sessions. It is clearly printed and there is an excellent index.

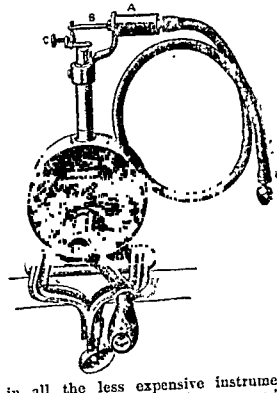
Lemco Dishes for all Seasons. By EVA TUITE. London: Lemco. Pp. 116 and index.—Lemco is the original extract prepared by the Liebig Company and has avowedly but little food value. But it is a stimulant to gastric digestion and gives a pleasant flavour to many food substances. The little book before us contains some admirable receipts, most of which are flavoured with Lemco, though some sweet dishes receipts for which are given are, of course, made without it. In small households where there is not enough meat consumed to enable the cook to keep a stock-pot meat extracts will be found very serviceable; they contain, however, so much potash salt that they should be used with caution.

We have received from Messrs. Pears a copy of *Pears' Annual* for Christmas and as usual the *Annual* compares well with the Christmas numbers of the best and most firmly established illustrated papers. The coloured illustrations with which the text is freely diversified are for the most part pretty things prettily reproduced, while the three coloured supplements are all genuine works of art.

New Inventions.

HAND-POWER OTO-MASSEUR.

Messrs. Krohne and Sesemann of 37, Duke-street, Manchester-square, London, W., have made this machine at the suggestion of Mr. Richard Lake. The piston or air-pump A differs in no material way from those in use on other machines. Up to the present time the limit



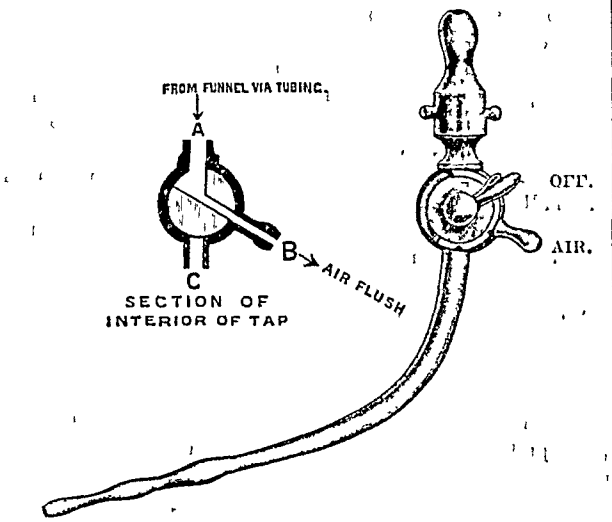
of speed in all the less expensive instruments was at the outside a few hundred vibrations per minute; with Mr. Lake's instrument the pace of 1500 vibrations per minute can easily be obtained and kept up by making one complete revolution of the handle every second. Another advantage afforded by this instrument lies in the readiness with which the vibrations or strokes of the air-pump per minute can be estimated; the formula being: divide by four the number of revolutions of the handle per minute and add two cyphers to the result. By means of the screw adjustment C, which is the outcome of experiments

carried out by the above firm, the length of the piston bar B is increased or diminished at will, and thereby the strength of the pump is regulated.

COMPLETE APPARATUS FOR VENOUS AND SUBCUTANEOUS INFUSION IN STERILISER, WITH IMPROVED VENOUS INFUSION CANNULA.

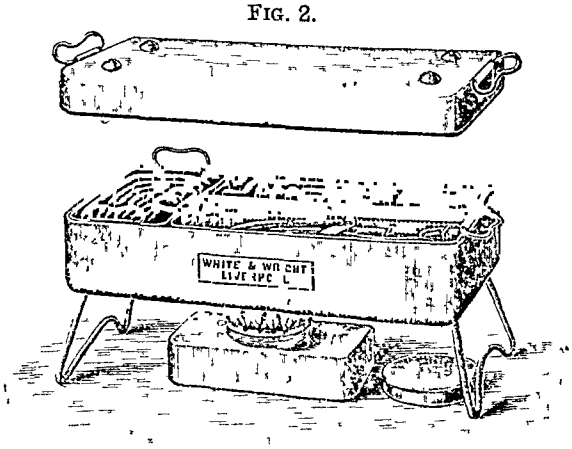
BY the use of this cannula the chief disadvantage of the ordinary one, that it cannot with safety be left *in situ* in case further infusion should be necessary, is obviated. Before inserting into the vein the cannula is flushed through and filled in the ordinary way, the tap afterwards being

FIG. 1.



turned to "off." When the nozzle has been tied into the vein the tap is turned to the intermediate nozzle labeled "air" to see that the stream is flowing well and then full on, directing the solution into the vein. When as much as is required for the time being has been infused the tap is turned "off," the top joint to which the tube is attached is unscrewed, and the cannula is secured to the arm wrapped in a little gauze. If further infusion should be necessary the tube is again screwed on to the cannula, the funnel is filled, and the tap is turned to "air," all the air contained in the tube and upper part of the cannula being then flushed out. As soon as a good stream is flowing the tap is turned full on and the solution is directed into the vein. It will be noticed that a spring arrangement indicates when the various "stops" are reached. The nozzle has three bulbs of different sizes so that one cannula is suitable for any sized vein. The complete apparatus contains a four-ounce glass funnel, six feet of rubber tubing, a silver venous cannula, a subcutaneous infusion needle, a solid forged

FIG. 2.

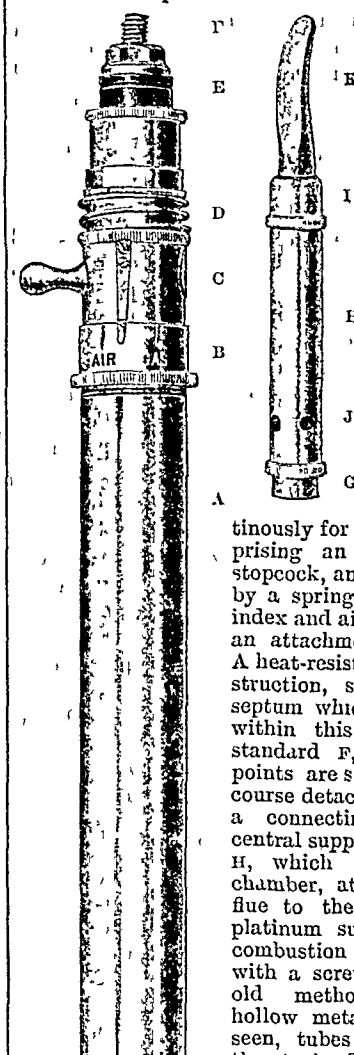


scalpel with blunt dissector end, a solid forged aneurysm needle, aseptic scissors, aseptic dissecting forceps, a metal tube containing needle and silk, a tube of saline tabloids, gauze for dressing, aseptic sponges, and a bandage. The steriliser measures eight inches by four inches by one and a half inches. The advantages claimed for the "set" are: (1) all the instruments and appliances actually required for venous infusion are kept ready to hand in a steriliser in which they can be carried and boiled immediately, the bandage and tube of tabloids only being removed; and (2) since rubber blackens instruments when boiled with them the tubing is boiled separately in the steriliser in the box compartment, which contains the lamp while in transit. This cannula and infusion apparatus have been made by Messrs. White and Wright, 93, Renshaw-street, Liverpool, according to my directions. W. BLAIR BELL, M.D., B.S. Lond., M.R.C.S. Eng.

Liverpool.

A NEW THERMO-CAUTERY.

THE maker and inventor of this new thermo-cautery is Mr. W. H. Beach, of Bridgnorth, Salop, who supplies it for the inclusive price of 105*s*. He states that being present upon one occasion while a Paquelin cautery was in use, the accidental upsetting of the bottle containing the hydrocarbon occurred and convinced him that there were risks in using the apparatus. He therefore decided to devise a cautery in which the bottle could be dispensed with. The Beach cautery consists of the following parts. A stem or handle A acting as a combined reservoir and vaporiser; this chamber is lined with cotton wick which absorbs sufficient hydrocarbon (three quarters of an ounce) to work the cautery continously for one hour. A trunk B comprising an aerator, refrigerator, and stopcock, and collar C, kept to its seat by a spring D; this collar carries the index and air nipple, the latter forming an attachment for the bellows tube. A heat-resisting block E, novel in construction, superimposes a wire gauze septum which prevents lighting back; within this block is a connecting standard F, to which the working points are screwed; these latter are of course detachable, and are made up of a connecting boss G carrying the central supply-tube and the outer case H, which supports the combustion chamber, at the same time forming a flue to the exhaust orifices J. The platinum supply tube as well as the combustion chamber K are mounted with a screw cap I in place of the old method of soldering. The hollow metal handle has, it will be seen, tubes projecting inwardly from the top. The tubes terminate near the centre of the handle which is lined with cotton wick and forms a reservoir and vaporiser, the gaseous mixture being at the same time aerated in such a way that the proportion of gas and air can be regulated with great nicety. The instrument can be raised to a white heat in half a minute, and similarly by allowing a blast of cold air to force its way in the heated portion of the instrument can be expeditiously cooled. The heat-resisting block, which with the septum renders it impossible for the gaseous mixture to light back and explode, is constructed of ebony with mica washers above and below, the bore in the ebony being greater than that of the standard, so that there is no metallic contact with the block. We have employed the cautery in treatment and find it very handy. The platinum point is easily raised to, and kept at, the desired temperature, when by a little practice the method of working the instrument has been learned. The absence of the benzene bottle is a great convenience.



THE LANCET.

LONDON: SATURDAY, DECEMBER 17, 1904.

The Medical Arrangements in the South African War.

THE report which has just been issued on the medical arrangements in the South African war by the late principal medical officer of the South African Field Force, Surgeon-General Sir WILLIAM DEANE WILSON, K.C.M.G., is an official document of the greatest importance. All the points connected with the medical history of that war, whether contentious or otherwise, are passed in review and are duly weighed and considered, the scope of the document is of a very comprehensive character, and it is replete with information on medical service in modern warfare. Owing to the officially responsible and authoritative position which Surgeon-General WILSON held in the field throughout the campaign he must have been well acquainted with the events which go to make up its medical history, so that we can feel certain that the various statements and the corresponding deductions have their foundations upon fact. Lest it might be thought that as the head of the medical service in the field, Surgeon-General WILSON set about framing and constructing his report merely with the object and on the lines of vindicating his department we may say at once that such is not at all the impression that we have formed. He has succeeded in great measure in doing this we may venture to hope and to believe, but to take such a limited view of the plan of the report is altogether to miss its meaning. Everything connected with the late war in South Africa, including the medical arrangements, having indeed been already subjected to exhaustive inquiry and report by several commissions and committees, there is no need of this being done at the present time. It is impossible not to be struck with the honesty and care with which the statements of fact connected with the late war have been set forth and with the manifestly fair and judicial spirit in which these have been weighed as well as by the temperate way in which the conclusions arrived at have been expressed.

The report itself consists of 16 parts and, supplemented by the appendices, covers altogether 395 pages exclusive of the very useful illustrations, maps, and plans with which it is copiously provided. An adequate consideration of such a document, particularly as many of the topics are fraught with the highest scientific and even national interest, will not be expected from us in a hurry, and all that we now propose to do is to advert to a few preliminary points. Surgeon-General WILSON in a covering letter to the Director-General of the Army Medical Service in submitting his report takes the opportunity of expressing his warm appreciation and thanks to all concerned—whether civil, military, or colonial, or belonging to the Red Cross Society or to the various voluntary and philanthropic organisations and many private individuals whose aid and devotion, he says, made it possible for him "to carry out a task which far exceeded any anticipation, both in magnitude and duration." It is impossible here not to be reminded that the military medical arrangements of the country are largely dependent upon voluntary assistance; nor can we blind ourselves to the fact that while this seems very alarming in times of war when it leads us into actual misery and to the brink of disaster, in times of peace no one seems to mind. Part I. of the report sets forth a general account of the medical arrangements, and is sufficiently illustrative of our words, for it shows the state of complete unpreparedness in which we were when the war in South Africa began and the enormous force which, as everybody knows, had to be provided for medically in that country ere it ended. In concluding this section of his report Surgeon-General WILSON briefly but ably summarises the features of the campaign by which the medical arrangements in the South African war were chiefly affected. He calls attention, as we have so often done, to the unexpected magnitude and duration of the military operations and to the strength of the forces engaged as compared with the *personnel* of the medical service; he shows the labour imposed upon the medical service in having to provide the requisite hospital accommodation over and above that which had been at first estimated for; and he lays stress on the very exceptional nature and unforeseen changes in the plan of campaign. We are not surprised to find that the difficulties of transport are described as the greatest obstacle with which the work of the medical service had to contend. Surgeon-General WILSON holds them largely responsible for the difficulties in the advance from the western line to Bloemfontein and for the unfortunate conditions which obtained there for some weeks after the entry of our troops. The lapse of time that has taken place since the occurrence of the epidemic of enteric fever at Bloemfontein and, indeed, since the end of the war has enabled Surgeon-General WILSON to mature his opinions. The result is an instructive and well thought-out report about which we shall have more to say.

Pathological Research in Insanity.

OF late years the problem as to the best method of dealing with recent and curable cases of insanity has been receiving increasing attention. The ordinary plan of the county asylum has been, and doubtless still is, to classify such cases separately but the classification in most instances has not gone beyond the provision of a separate ward or wards for them. Some county asylums, we are aware, have provided a separate "acute block" or "acute" hospital, equipped at considerable expense, and designed to receive and to treat all curable cases, while others are contemplating a similar provision. The experience thus being gained will in course of time afford the basis for a comparison of great interest and value between the newer and the older methods. It is but reasonable to hope that more cases will recover and that recovery will be expedited under the newer method. But however

admirable the plan of segregation of recoverable cases may appear in theory, public bodies intrusted with the administration of public funds cannot be expected in any general way to sanction the considerable expenditure which the erection and equipment of these special blocks entail without practical evidence of their economical value.

The scope of inquiry as to the best means of disposal and treatment of recent and curable cases of insanity is, however, wider than the above considerations would indicate. The question of the desirability of adding wards and out-patient departments for mental cases to hospitals in the great centres of medical education throughout the kingdom is one of much importance. It has already received consideration and practical solution in various parts of the continent and is, no doubt, attracting increasing attention in this country. The conception of the acute block of the county asylum appears to us to be sound in principle, and even with departments for the observation and treatment of mental diseases as part of the great teaching hospitals there would still be need of them, especially in counties remote from large centres of activity. The chief arguments for the creation of such departments are based upon the axiom that workers in special departments of medicine should keep in touch with workers in "general medicine," the theory being that no real grounds exist for the divorcement of insanity from other diseases in the matter of study and treatment. This principle is unfortunately most difficult to observe in practice in consequence, primarily, of the inconvenience and risk that attach to the conduct of patients suffering from insanity. The importance of the subject in regard to the welfare of the community is a sufficient justification for strenuous efforts being made to surmount the difficulties of the case.

The establishment of departments for treating recent and curable cases of insanity in large centres in the manner referred to would facilitate the solution of a further difficulty in the way of the scientific study of mental disorders by enabling the pathological laboratory, which is found in connexion with most asylums, to be in a central and accessible situation and yet not divorced from the clinical department. The great advantage of collaboration in this respect has repeatedly been pointed out. It is undoubtedly a sound principle that clinical investigation and pathological research should go hand-in-hand; that the laboratory worker should be in touch with the wards. The usual method of observing this principle in the department of insanity is to have the labo atory in connexion with the county asylum. An authority controlling several asylums in some cases has a well-equipped laboratory at each or most of these, as in Lancashire and the West Riding of Yorkshire. In London, as is well known, the pathologist to the asylums of the County Council is provided with a laboratory at one of those institutions. It appears to us that if—to take as examples the cases mentioned—the pathological laboratory were placed in Manchester, Liverpool, Leeds, and London respectively, in conjunction with a department for mental diseases at a hospital, there would be a conservation and concentration of energy in respect of the work to be done and the cause of scientific investigation of the pathology of insanity would benefit. The asylum pathologist would be brought into direct communication with workers in general pathology, bacteriology, and organic chemistry, in addition to clinical workers. The laboratory would be more largely sought by those desirous of conducting research, including holders of research scholarships. The likelihood of its being advantageously used for extended and conjoint experimentation (which is decidedly remote where laboratories, as now, are numerous and scattered and situated in comparatively inaccessible places) would be enhanced. By these means the work of cerebral and mental pathological research, so intricate and so almost unfathomable, would be consolidated and made more likely to produce successful results in "ministering to the mind diseased."

Medical Men as Administrators.

IT has become so generally the practice to place not only the medical but the administrative control of institutions for the sick in the hands of medical men that we may well devote a little time to the consideration of this procedure in order to decide whether the method is one deserving of encouragement or one to be discountenanced. The art of managing men and women is—like many other valuable ones—not taught in our educational centres; it must be learned in the school of experience. In an institution the interactions of human personalities are more momentous than are the casual contacts of life in the world outside and the mental attitude of the individual is peculiarly subject to the moulding influences of the environment. The executive in our asylums and infirmaries—the chief places which are ruled by medical men—forms a definite community with its own special virtues and failings, its own possibilities and limitations, and its own ethical principles and form of public opinion. Only those who are, or have been, members of such a community can acquire a thorough knowledge of its internal economy and of these members the representatives of the medical profession are, from their wider culture and deeper insight into human nature, the most likely to display the patience, tact, and other manifestations of broad-mindedness which are essential to efficient working.

It must, however, be admitted, as our lay contemporaries will, no doubt, hasten to point out, that "scandals" are by no means infrequent in institutions which are nominally managed by medical men. The reason for this state of affairs is not far to seek. It is to be found in the fact that in very many cases the medical superintendent is not allowed to superintend; his powers are not commensurate with his responsibilities and he is constantly thwarted and handicapped by those who should be his supporters. The system of government by committee is the principal source of the difficulties which occur in institution work. It is not suggested that medical superintendents as a class are exempt from the liability to make mistakes or that they are free from the human weaknesses which militate against anything in the way of ideal administration but in both these respects they are a long way ahead of the average committee-man. The domination of the committee is an expression of the principle that the expenditure of public money should be controlled by those who provide the funds but it cannot be truthfully said that this end is very satisfactorily attained at present. There

is, of course, something to be said for the argument that he who pays the piper should call the tune. But how if the purse-bearer has no ear for music? This is, in effect, the position in which democracy has landed us; the tendency is to place in office men whose chief qualification is self-assertiveness and who have no desire to listen to anything more melodious than their own voices. We readily admit that this description does not apply to all, or as yet even to a majority of, popular representatives but unfortunately quite a small proportion of irreconcilables on a committee will suffice to block all progress. As numerous opportunities of studying the defects of the current system have been accorded to us we propose to indicate some of the ways in which committees of management betray the interests which they have been appointed to promote. Meeting once a month or once a fortnight for a few hours, with a lengthy vacation in the summer, the committee, however good its intentions, can never obtain more than a superficial acquaintance with the inner life of the institution which it controls but this consideration does not weigh with it in the least. It settles off-hand complex questions which have exercised the mind of the superintendent for a long period, very possibly reversing its decision on a subsequent occasion. Swayed by the passions engendered of self-interest, personal animosities, or party politics, it veers from irrationality to irrationality. It grants funds freely for some fatuous purpose and practises a niggardly economy where liberality would be wisdom. It makes wild suggestions which cannot be carried out and demands voluminous reports which it never finds time to study. It postpones indefinitely the consideration of important matters and appoints special subcommittees to deal with trivialities. It distributes reprimands and rewards without obvious relation to anything but the luncheon hour and insists upon being treated with a deference which it does nothing to inspire. Often a committee is more or less completely under the control of one or two individuals with axes to grind. In the former case the axe is ground, in the latter the competitors probably do not get beyond wrangling over the grindstone. One danger in particular besets a governing body which follows lines like these. Since the committee cannot be appealed to in an emergency and will not in such a case permit its superintendent to act alone, authority must be delegated to some lay official, usually a clerk, who thereby acquires an influence which he may employ for his own aggrandisement or that of his friends.

Added to the superintendent's difficulty in dealing with his committee as a whole are the conflicts into which the performance of his duty brings him with individual members. Sometimes there are to be found on the platforms of municipal and parochial affairs men whose good faith is an inappreciable quantity. This type of man, detected perhaps in some piece of jobbery by a medical superintendent, is ready to descend to any meanness in the pursuit of revenge. Helped by some creature of his own caste whom he has succeeded in introducing to a subordinate post, he foments disloyalty among the staff or brings before the committee garbled accounts of trivial incidents with a view to obtain public censure of the officer who has offended him. Sometimes the obstructionist is merely a crank—antivaccinationist or what not—who is blind to everything except the supposed merits of his particular hobby which he insists on riding in and out of season. There is, again, the philanderer who gushes over female members of the institution staff or secretly carries on correspondence with them. It was a gentleman of this calibre who supported a motion that nurses applying for appointments should be brought before a certain board on the ground that he "liked to see the pretty girls," while another of the same kidney insisted on climbing into an ambulance to interview the nurse who, to her credit be it said, promptly thrust him into the muddy roadway and left him to a term of repentance. Instances of abuses like these could be quoted by any experienced medical superintendent and the remedy for the evils indicated is in most cases simple enough. The senior medical staff of any institution is pretty sure to have attained that position on its merits and to be worthy of confidence. If that confidence was displayed by boards of guardians and kindred corporations the appointment of medical men to administrative posts would prove as satisfactory in practice as it is sound in theory. The value of a medical training has been over and over again proved by the many members of our profession who have risen to eminence in the administrative affairs of State.

Priority of Invention.

FEW questions are liable to be discussed with greater acerbity, or to be more productive of angry rivalries, than those which turn upon alleged priority of invention or of discovery and it is perhaps not surprising that this should be the case. The well-known philosopher who complained that the ancients had stolen all his best thoughts must, under the conditions which govern the progress of science, be now and again recalled to our memories; indeed, it is common to find that an ingenious and apparently new suggestion, the offspring of a certain combination of circumstances, has been made and acted upon under similar conditions at some earlier time. FARADAY has drawn an almost pathetic picture of the number of thoughts and theories which, having passed through the mind of a scientific investigator, have been crushed in silence and secrecy by his own severe criticism and adverse examination. It perhaps would not be impossible to produce a corresponding one, dealing with inventions or discoveries which have been quite genuine, but which, nevertheless, have been anticipated by others with whose works the subsequent inventor or discoverer was unacquainted, or have been reached simultaneously by two persons travelling along different lines. The most conspicuous example of the latter kind is that which was afforded by those researches of ADAMS and of LE VERRIER which led them independently to assert the existence and to calculate the position of a previously unknown and unsuspected planet; while illustrations of the former kind are of almost daily occurrence in the history of surgery. Quite recently, for example, we saw in a French journal an elaborate account of a method of overcoming a not very common surgical difficulty, coupled with some well-deserved recognition of the ingenuity which had suggested the expedient; the surgeon thus praised and the writer who praised him were alike that

method had been described and figured in an English book, published 20 years before. In such a case it seems not worth while to dispute about priority. It was manifest that the Englishman had been confronted by a certain mechanical difficulty and had seen a way of escape from it; the Frenchman had been confronted by the same difficulty on a subsequent occasion and his mind travelled over the same paths and arrived at the same result. It would be absurd, in such an instance, to deny to the second of the two surgeons precisely the same degree of merit as that which could be attributed to the first and it is manifest that no very special claim could be maintained on the part of either. Nevertheless, if the matter had been one of sufficient magnitude, it is quite conceivable that it might have furnished ground for an active disputation in the press or by biographers.

It is never quite impossible that the real proprietor of some one little ewe lamb in the way of discovery, an ewe lamb that lay in his bosom and was to him as a daughter, may have been aroused to a not entirely unjustifiable sense of grievance by the attribution of his darling to some other, some rich man abounding in flocks and herds, and may hence have been inclined to urge his claim with an emphasis apparently in excess of its importance. From such a case it would be difficult to withhold sympathy, especially as in the medical profession, to its great credit, discoveries can seldom be sources of direct profit; there is therefore the more reason for taking care that any credit to be derived from them shall be assigned where it is due. Hence arises some excuse, and perhaps the only one which can be suggested, for attaching the name of a physician or surgeon to a structure, to an operation, to an injury, or to a group of symptoms hereafter to be described as somebody's "disease," somebody who, if he had not been thus distinguished, would in all probability have been absolutely unknown beyond the limits of his own country or of the circle of friends or students with whom he was brought into personal relations. The average English practitioner would know POTT independently of a fracture and HUNTER independently of a canal; but he is not quite unreasonable when he asks for further information about RAYNAUD or WERNICKE, and feels doubt as to the precise character of the "phenomenon" of the former or of the "sign" of the latter. Sometimes the invention is more important than the individuality; so that we scarcely know of WARD except by his paste or of JAMES or of DOVER except by their powders. This only happens, of course, in the case of comparatively small people; no one, for example, has so far described vaccination as "JENNER'S method." But it is, as a rule, the small people who are the most solicitous about their "claims" and who, not unnaturally, are the most combative in asserting them. So long as the claims are just, and so long as they are not pressed in any manner injurious to the public interest, a large degree of tolerance may be reasonably extended to a natural desire not to remain unknown.

The danger of prophesying is proverbial, but there are many signs that the future of science is more likely to resemble a cairn than a temple, to be a structure reared by the coöperating and almost unrecognisable labour of many contributors rather than by the overmastering idea of a single mind. We do not, of course, forget PASTEUR, and it would be foolish to deny the possibility of similar incursions into the regions of the unknown on the part of investigators whose powers have not yet been fully displayed. But the general tendency seems to be rather in the direction of securing the conquests already made than in that of extending them widely into new territories; while in some conspicuous instances, which we cannot contemplate without at least a shadow of regret, there is a manifest inclination to desert the *terra firma* of established facts for regions of obscure and doubtful speculation. In the progress of science the next step is more worthy of practical consideration than the distant horizon and the most genuine discoverer is he who renders that next step secure. It may be that it seems comparatively unimportant for the moment but it may none the less contain the germ of the future. Work of this kind makes no impression upon the popular fancy and altogether eludes pictorial representation in enterprising newspapers; but it none the less appeals to those who know, and its accurate accomplishment affords just ground for confidence in the subsequent conclusions of those by whom it is undertaken and carried to its close. The proceedings of the Cancer Research Fund, so far as it is at present possible to judge of them, appear to be typical of the precision, the completeness, and the self-abnegation, with which researches having for the sole end the establishment of truth must be conducted. The men engaged in the work are too strictly coöperators to have much opportunity for what is vulgarly known as "discovery" and it is safe to assert that "priority" will have no more than a secondary importance in their eyes. Absolute "priority" must in many cases be indeterminable; so numerous are the instances in which one discovery contains the potentiality, sometimes almost the necessity of another, and in which the extension of our view depends entirely on our position upon the shoulders of our predecessors. It was well known, nearly a century ago, that the use of a mosquito net afforded a large amount of protection against what was then called malaria and possibly some old observer may have alluded to the fact in a suggestive manner. But any dispute concerning the claims of various modern and eminent pathologists founded upon this old knowledge would now be disregarded. The germ of all immunisation was latent in the traditional knowledge of Gloucestershire milkers and illustrations of the same kind crowd fast upon the memory. They should lead to the recognition of the principle which was laid down, we think by LAVATER, that the merit of a discovery does not lie so much with the man who first makes it as with him who first proclaims it in such a manner as to secure attention to its importance. If this were universally admitted a good many claims to "priority" would lapse into insignificance or would be treated with neglect.

CHEMISTS' EXHIBITION.—The Eleventh Annual Chemists' Exhibition, organised by the proprietors of the *British and Colonial Druggist*, will be held in Covent Garden Opera House during five days from March 13th to 17th, 1905.

Annotations.

"Ne quid nimis"

THE ADVANCE IN THE PRICE OF SUGAR AN IMPORTANT FOOD QUESTION

THE substantial advance in the price of sugar is a serious matter Physiologically sugar is of the utmost importance as a food contributing to the supply of energy to the body more economically than does any other food It is thus not merely a substance that sweetens things or that appeals to many palates but a real fuel food When its price becomes considerably enhanced, therefore its economic superiority as a food is menaced It is not in our province to discuss the fiscal aspects of the rise in the price of sugar or to express an opinion on the question as to whether or not this rise has been due to a mistaken policy on the part of our legislators There seem to us to be however, a few points in connexion with the present high price of sugar which, in view of our interest in the general subject of the public food supply, we may be justified in discussing It is freely asserted that the rise in the price of sugar is the inevitable result of the Convention which put an end to bounty fed sugar "We told you so" is the cheap cry of those who deal in sugar, and yet these very people who, on their own statement, possessed enough foresight to convince themselves that sugar would be very dear, failed to stock supplies when it was cheap and plentiful To be sure, to be wise after the event is no advantage to the speculator but yet, from a purely sordid point of view, why was not sugar bought on a cheap market if some dealers were so confident that the Sugar Convention would lead to a big advance in price? We might take a lesson from the bees and stock our sugar when it is summer (the season of abundance) so that when the winter comes (or the season of shortage) we may have abundant stores to fall back upon The truth about the present high price of sugar seems to be that the sugar harvest has failed and there is no reason for anticipating that the high price will be permanent unless bad year succeeds bad year The harvest of sugar may be a failure just as other harvests fail Fresh demands, too have been created in the western plantations which, owing to the derelict state of the factories the sugar growers have not been able to supply Such a position will doubtless be remedied in a short time Certain mineral water makers and manufacturers of jams appear to have been hit hard over the advance in the price of sugar, although we were not aware that these trades were dependent upon sugar Many members of the trade at any rate, have persistently urged that sugar was inferior stuff to glucose or invert sugar made from starch by the action of acids Glucose was so excellent in the making of beer that many people were poisoned by the arsenic contained in it which was derived from the arsenical sulphuric acid used in its preparation The use of glucose in the place of natural sugar in aerated beverages and in jam and marmalade, certain manufacturers have been good enough to inform the public, gives an immensely superior product According to this their grievance over the rise in the price of sugar must be imaginary unless (though we do not understand that such is the case) glucose has advanced in price in the same way as sugar At any rate we are not aware that the price of starch has been similarly advanced, and from starch an unlimited quantity of glucose may be made

KING EDWARD VII SANATORIUM

HIS MAJESTY'S Advisory Committee, as will be seen by our advertisement columns, is inviting applications for the post of medical superintendent to the sanatorium The salary offered is £500 per annum rising to £600, with board, lodging, and attendance, and candidates who must, of course, be registered under the Medical Act, are to be 30 years of age or more and must have had practical experience in sanatorium work, The Advisory Committee, it is known, is very anxious to secure a thoroughly good man for the post The King Edward VII Sanatorium will naturally be regarded as more or less a model by public bodies or private individuals erecting sanatoriums for tuberculosis and if only for this reason it is essential that the medical management should be in the hands of a thoroughly capable administrator The contract for the building of the sanatorium does not expire until December, 1905, but as in many ways it is desirable that the superintendent should be appointed a little time before his actual duties commence the committee is now advertising the post Applications, with testimonials, should be sent in on or before Jan 31st, 1905, addressed to the Secretaries, 19, Devonshire street, Portland place London W

A VILE CONSPIRACY

THERE is from time to time brought home to every general practitioner the grave risk which he runs in the everyday practice of his profession through unfounded charges being made against him by female patients Such an accusation may be the result of a hysterical hallucination and the woman who makes it may herself believe that a gynæcological examination has in actual fact been an assault upon her chastity More often the object of the accuser is to levy blackmail At the assizes recently held at Swansea an instance coming under the latter category was disclosed in which the most callous cruelty was displayed not only by the woman who made the accusation but also by her husband It appears that in 1903, Dr A D Griffiths who has practised for several years in the town of Bridgend, was consulted by the wife of an electrician named Faithfull for some trouble which she thought was the result of her recent confinement After speaking to the husband on the matter Dr Griffiths made the necessary examination, at which no third person was present, although Dr Griffiths had desired that there should be The condition found was apparently remedied, but in September of the present year the woman again consulted Dr Griffiths saying that she had a return of her previous symptoms An appointment was made for a further examination and this had barely been begun when the husband rushed into the room and assaulted Dr Griffiths heaping upon him insulting insinuations Dr Griffiths at once consulted his solicitor who demanded from Faithfull that he should institute proceedings in the Divorce Court forthwith As no steps were taken in this direction within a week Dr Griffiths claimed damages for assault and slander and it was this action which came before a jury at the Swansea assizes. Neither the defendant nor his wife put in an appearance and a few days before the date of the trial their solicitor stated that he did not know their whereabouts Mr Justice Bray, in his summing up advised that such damages should be given to Dr Griffiths as would show that the charge brought against him was absolutely disbelieved, and after a few minutes deliberation the jury awarded him £500 In this bare recital of the facts of the case we have omitted one feature which though a side issue is so odious that it is hardly credible A few weeks after Dr Griffiths had commenced his action for assault and slander Mrs Faithfull summoned her husband before the Bridgend justices for

maintenance, and the day before the case came on she telephoned to Dr. Griffiths that she wanted to withdraw the summons and added that if she only had some money her husband would take her away from the town. Dr. Griffiths very properly referred her to his solicitor. On the following day at the police court she swore to acts of immorality with Dr. Griffiths and within a few weeks she left the town and was met in London by her husband who, it has since become known, had been for some months in an impecunious condition. No words of sympathy can compensate Dr. Griffiths for the distress of mind which he must have undergone during the past three months, but it may be something for him to know that the evidence given at the assize trial by Sir John Williams, by Mr. Wyndham Randall (the senior medical practitioner in Bridgend), and by Mr. J. Ewen Maclean (honorary gynæcologist to the Cardiff Infirmary) when they testified to the correctness of his behaviour was absolutely convincing. It should be also especially pleasing for him to receive from his immediate neighbours, the members of the local branch of the British Medical Association, their congratulations upon his having "so completely justified their trust in his unblemished character." The thanks of the whole medical profession are due to Dr. Griffiths for the resolute manner in which he faced a situation which the bravest man could contemplate with feelings only of dismay.

THE PRESIDENTIAL ADDRESS AT THE AMERICAN NEUROLOGICAL ASSOCIATION.

AT the recent annual meeting of the American Neurological Association held in St. Louis the presidential address was delivered by Dr. Frank R. Fry of St. Louis and an account of it is published in the *Journal of Nervous and Mental Disease* for November. The specialty of neurology, said Dr. Fry, was an instance of the division of labour, a legitimate division resting on the fact that modern diagnostic skill and refinement in diseases of the nervous system could only be reached by persons who had devoted long and earnest study and given close attention to neurology and psychiatry. The basis for the study of these two great branches of medicine had been well and soundly laid during the past 25 years and complex though the problems were with which these departments had to deal they were at the present day being adequately met and steadily solved. The claims of neurological and psychiatrical science were modest; they followed simply the application of the inductive method, by the use of which enough had been accomplished in recent years to justify its further employment in the future. Neurology had fallen into harmony with the methods and spirit of the biological and physical sciences; and psychology, long fettered by metaphysics, had emancipated itself from its bonds and now turns to the more tangible data and methods of the psychiatrist and the neurologist. The public recognition of the value of the results achieved by modern researches in psychology and education is increasing, "and this, of course," says Dr. Fry, "brings us into the councils of pedagogists and State educational authorities." The recent decades of wonderful progress of the surgery of the nervous system were rendered possible only by the physiological and clinico-pathological discoveries which preceded and furnished the knowledge and basis for operative possibilities. Those espousing neurology to-day as a branch of practice or of laboratory research would find that the pioneering had been so thoroughly done that the genuine and the spurious were already well distinguished and demarcated from one another and that the newcomer required a considerable equipment in scientific methods and knowledge to take rank in the actual work. America had contributed her share to its advancement and though it was impossible to give a chronological summary yet a mere enumeration of the names erythromelalgia, athetosis, amaurotic family idiocy, and adiposis dolorosa brought before them well-recognised syndromes of diseases which were first recognised and described and named by American neurologists. The American Neurological Association was organised 30 years ago and had risen since then to the position of a society including representatives of all the best neurological work and research in the United States. 20 years ago in America an occasional lecture with a neurological title in some few of the schools was all that the pupil heard of the subject. "Now every school of any pretension provides for both laboratory and clinical instruction in neurology as carefully as its resources permit." The American Neurological Association has for its aim not only to advance the science of neurology but to broaden its scope as a working branch of the medical profession by bringing it into sympathy and touch with all the sister branches of the profession.

FADS AND FANCIES AS TO FOOD.

THERE is a society in Manchester called the Manchester Physical Health Culture Society. Sometimes its speakers advocate very sensible modes of living and at other times their subjects seem to run away with them. On Nov. 23rd a gentleman gave an address chiefly consisting of a wholesale condemnation of most ordinary foods which he thought were the principal cause of disease. For the ignorance on this subject he considered that the education authorities were morally responsible because they did not teach hygiene in all the schools. Salt was the first thing that came under his ban and he is reported as saying that, "like arsenic, it is an irritant poison," which we must have, but as natural vegetable salt, which is usually boiled out and thrown away, thus drawing a marked distinction between what he calls "organic vegetable salt," and "inorganic mineral salt." The former, he says, enters into chemical combination in the system, while the latter "is merely held in mechanical solution in the blood. ..... When minerals out of the earth, such as salt, soda, lime, iron, phosphorus, sulphur, coal, or brimstone are eaten, they clog the system in much the same way that dust and dirt clog and wear out machinery," and he goes on to say that some eminent authorities ascribe cancer to the use of salt, especially when food such as fish, meat, bacon, and ham is eaten which has been cured by salt. The idea that salt is the cause of cancer is, of course, by no means new and is believed by many as firmly as folks believed some 50 or 60 years ago that brandy and salt would cure everything. He then runs amuck at the use of "fiery spices, as mustard, pepper, ginger, cloves, nutmeg, horseradish, sauces, vinegar, and pickles," passing on to denounce—we must say quite rightly in many cases—the use by manufacturers and vendors of food of such substances as borax, boric acid, soda, baking powder, cream of tartar, aniline dyes, and sulphate of copper for colouring. Hence the foods in which they are mostly used, as jams, marmalade, jellies, milk, butter, margarine, cheese, potted shrimps, sausages, pies, brawn, polony, cured meat, fish, ham, bacon, and many of the tinned foods, ought not to be eaten. "The law ought to forbid these poisons being introduced into the blood." Of course the lecturer condemned tea, coffee, cocoa, meat extracts, and alcohol as not being foods but deleterious stimulants which "mortgage our nervous forces." Aerated waters, he says, are generally unwholesome from their containing preservatives as tartaric and carbonic acids, saccharine, artificial or mineral colourings, and flavourings. "The only liquid necessary for man is water." Sugar and all foods containing it are bad, also honey, while dried, crystallised, very sweet fruit such as dates and figs are little better. "Fats are another popular

but disease-breeding, death-dealing food. ..... These fats bring on headaches, fevers, colds, and general debility and it is almost impossible to have a fit, a stroke or heart failure without consuming these foods." He does allow that some fat is necessary but says that it may be obtained from whole wheat, oats, maize, milk, nuts, fish, fowl, and flesh from sheep and oxen naturally fed on pasturage but not from those artificially fattened, like pigs and prize cattle. He, of course, condemns pastry, puddings, cakes, all plain and fancy bread, biscuits, confectionery, and other starchy foods that have any animal or vegetable fat, oil, or butter as an ingredient. At the close of the lecture one of the audience asked anxiously whether Mr. Nawell, the lecturer, would tell him what he might eat. "Mr. Nawell recommends," he said, "vegetables, rice, and salads. Is that all?" He was assured, however, that a few things were still left that a person over 35 years of age might eat safely. This abstract illustrates the curious mixtures of sense and nonsense with which the mental appetites of our intelligent northern people are regaled and shows, also, that the adage "a little learning is a dangerous thing" still holds good.

PATHOLOGY AT OXFORD.

THE University of Oxford possesses an admirably equipped pathological laboratory and, what is even of more value, the services of an excellent teacher in the same subject. The teaching of pathology and the upkeep of the laboratory, however, naturally cost money and in this vital necessity the University is lacking. The laboratory was built and furnished out of a sum of £5000 presented to the University for this purpose by one of its students, Dr. Ewen Frazer, and more recently the Rhodes trustees granted £200 a year for five years certain towards the payment of the Reader in Pathology and the upkeep of the laboratory. It is now felt, however, that the need for obtaining adequate and permanent financial support is so urgent that it has been decided to hold a meeting on Tuesday, Dec. 20th, at 20, Hanover-square, London, W., to which all Oxford men interested in the question, whether medical graduates or not, are invited. Sir William S. Church has consented to take the chair and a large and representative gathering is hoped for. Science is, except in large and comparatively compact commercial centres such as Birmingham and Liverpool, worse endowed than any faculty in the kingdom. It is an expensive subject to teach and its teachers for the most part give their time and knowledge for very inadequate remuneration. It is to be hoped that all Oxford men will contribute and that those of the public who are well endowed with this world's goods will assist in the furthering of a study which has for its ultimate end the relief of human suffering and the building up of a nation composed of healthy individuals who are the very life-blood of a powerful State.

SULPHUR DIOXIDE AS A DISINFECTANT AND DESTROYER OF RATS.

INVESTIGATIONS which have lately been conducted for the medical department of the Local Government Board by Dr. J. S. Haldane, F.R.S., and Dr. John Wade, D.Sc., on the destruction of rats and disinfection on shipboard furnish a valuable contribution to our knowledge of the efficiency of various gases as disinfecting agents. The report on these inquiries, now issued, records a large variety of experiments, some carried out on board a cargo-boat, some in a specially arranged shed, and others in the laboratory, the object of the whole series being to determine the ability of particular gases under practical conditions to destroy certain pathogenic organisms and also rats and insects. A few years ago sulphur dioxide (whether obtained by burning sulphur or from cylinders) appeared to be losing favour as a disinfectant for rooms and dwellings, but recent work has shown that the disinfecting value of this gas had been too readily under-estimated. In particular the experiments made by Dr. E. Klein, Dr. A. C. Houston, and Dr. M. H. Gordon[1] showed that under ordinary working conditions sulphur dioxide can be quite as powerful germicidally as formalin gas and later investigations in Paris have pointed to the same conclusion. In the case of ships sulphur dioxide in one form or another has always been the principal gaseous disinfecting agent used. In the destruction of rats, the sanitary authorities of Hamburg, under Dr. Nocht's advice, have had much success with carbon monoxide—the usefulness of which for this purpose was also demonstrated some years ago by Dr. Haldane—but this gas has practically no destructive action on pathogenic bacteria and does not kill insects. The bulk of the experiments which Dr. Haldane and Dr. Wade report have been made with sulphur dioxide in the form of "Clayton gas," a special preparation for the disinfection of ships obtained by burning sulphur in the Clayton apparatus. "Clayton gas" mainly consists of the residual nitrogen of the air, a small amount of unconsumed oxygen, sulphurous acid gas in quantities up to 15 per cent., and a considerable amount of sulphuric acid in suspension. The presence of the last-named makes the mixture white and opaque; its visibility and unpleasantness afford important safeguards against accidental asphyxiation; while its heaviness greatly facilitates the satisfactory distribution of the gas in the space which is being disinfected. The Clayton apparatus is now used to a considerable extent at certain foreign and home ports. The experiments with this gas, which seem to have been contrived very carefully showed that under conditions which are comparatively easy to obtain in practice Clayton gas forms a very efficient disinfectant of the places to which it gains access. As was to be expected, different pathogenic bacteria manifested different degrees of resistance. Anthrax spores were unaffected but plague and cholera bacilli were destroyed after a few hours' exposure to a "Clayton gas" atmosphere containing about 5 per cent. of sulphur dioxide. A point of general importance in connexion with disinfection by sulphurous acid is that the time of exposure proved to be a factor of considerably greater importance than the degree of concentration of the gas. Rats were readily killed; Dr. Wade from a series of experiments made with Dr. M. S. Pembrey concludes that a uniform diffusion of no more than 0·5 per cent. of sulphur dioxide through a hold will kill rats within two hours. Cockroaches and fleas would also be killed under these conditions. These results were obtained readily enough in comparatively empty spaces and in holds not containing cargo. But the results of attempting disinfection, or even destruction of rats, with a ship's cargo left in the hold were altogether different. The penetrating power of sulphur dioxide was found to be very gradual in the case of many articles of cargo, particularly woollen and other fabrics (not cotton), done up in tight bales. This was shown to be due mainly to the property which the fabrics possessed of absorbing the gas. Thus a bale of wool absorbed at least ten times, and a bale of jute at least four times, its own volume. The absorption takes place in the outer layers of the bale and its effect was very marked: in one series of experiments, after many hours of exposure to Clayton gas, the air within the bale contained no sulphur dioxide whatever, although the other non-poisonous constituents of the gas were found to have penetrated freely to the interior. Similar absorptive action was shown by grain and other food substances. In the case of flour the sulphurous acid retained made it useless for

[1] Report of Medical Officer of London County Council, 1901.

baking as the yeast became sterilised. A further objection to the employment of sulphur dioxide to disinfect a large number of articles of cargo is its liability to cause damage. In the case of Clayton gas this liability is increased by the presence of suspended particles of sulphuric acid, although any mischief due to this cause can be prevented by a light covering of paper. Dr. Haldane and Dr. Wade also found that in a hold packed with cargo the Clayton process not only failed as a germicide but owing to the absorption of gas by the bales it was insufficient to kill all rats and insects. They suggest, however, that if it is desired to attempt to kill rats before discharging the cargo a small proportion of carbon monoxide (say 10 per cent. of "producer gas") should be added to the gas used for the holds. They also point out that processes which employ cylinder sulphurous acid, and so are less likely to be destructive to fabrics, are worthy of further trial. Fortunately for commerce, which should not be hampered without good reason, the indiscriminate application of measures for the destruction of rats to vessels which happen to come from plague-infected ports is contrary to the International Sanitary Convention of Paris, 1903, to which Great Britain is a party, and is a proceeding for which there is no warrant at the present time. Mr. W. H. Power in a note to the report states this view emphatically, pointing out that the experience of recent years goes to show that if ordinary precautions are taken the risk of introduction and spread of plague in European ports is small and that measures for the destruction of rats in ordinary circumstances are called for only in the case of vessels on board which plague has occurred in the human being or in the rat. Where this is the case it seems from Dr. Haldane and Dr. Wade's report that satisfactory results would be obtained by first unloading the cargo with all practicable precautions to prevent the rats from escaping and then treating the empty holds with sulphur dioxide on the lines which they indicate.

A CLAIM UNDER THE WORKMAN'S COMPENSATION ACT.

AN interesting claim under the Workman's Compensation Act was heard at the Belfast Recorder's Court in November of this year. On Nov. 17th, 1903, a working baker named Neill, aged 54 years, sustained an accident in the course of his employment. In moving a bogey filled with bread the second toe of the left foot was seriously injured. The wound became septic and about a fortnight later tetanus developed. On Dec. 7th he was removed to the Royal Victoria Hospital, Belfast. The toe was amputated and antitetanic serum was injected. His life was said to have been in danger for ten days. He left the hospital on Dec. 30th. On Dec. 15th an agreement was come to between the applicant and his employer whereby the latter undertook to pay the former half his weekly wages during his total incapacity. Thus far the facts were not disputed. Compensation was paid until May 19th, 1904. From that time the respondent repudiated further obligation on the grounds, as he alleged, that the applicant had recovered from the effects of his injury and it was this issue the court had to determine. It was stated that Neill had been healthy for 30 years prior to the accident. At the trial there was considerable conflict of opinion between the medical witnesses. Professor T. Sinclair, who had the man under his care in the hospital, deposed that the action of the heart was unsatisfactory, being irregular in force and wanting in tone. "His symptoms showed an incapacity for full recovery of nervous tone and muscular strength." He thought the man was improving but that it would be a year or two before he recovered his nervous tone. Corroborative testimony was given by Mr. D. Mark, Dr. J. G. Clokey, Dr. H. F. Hanna, and Dr. T. S. Kirk. Dr. Monypeny, on the other hand, was of opinion that the man had recovered from the effects of the accident. He considered that the applicant's heart was "normal for a man of his age" and that all the symptoms of heart affection had developed since May. He believed, however, that the man would never be able to lift heavy weights. Dr. J. Walton Browne could detect no organic disease with the exception of the heart, which was "dilated and fatty" and greatly excited. If the evidence is correctly reported we are at a loss to reconcile the testimony of Dr. Monypeny and Dr. Browne as regards the state of the heart. It cannot be said that a dilated and fatty heart is the normal condition in a man aged 54 years. On one occasion when examined by Mr. Mark the knee-jerks were unequal and there was slight ankle clonus. Neill had lost a stone in weight and still complained of pain in the back and the lower extremities. In fact, his condition was diagnosed as spinal neurasthenia. Without further guidance we are not in a position to assert that the perverted action of the heart was dynamic, or symptomatic of organic disease. If it was the former we can readily understand it as one of a train of phenomena not unlikely to form a sequel in the case of a man who had undoubtedly suffered from sepsis and spinal irritation in its most acute form. The term neurasthenia, like "railway spine," is undoubtedly made to do service in support of the contention that a series of symptoms, and it may be objective signs, are conclusive of serious functional or organic disease. At the same time it shelters beneath it many instances of pretended disorder. After a careful survey of the facts in the case under consideration we feel compelled to subscribe to the decision of the learned Recorder that the applicant was still suffering from the effects and after-effects of the accident and that he was still incapacitated from carrying on his customary avocation. The rider added by the court, that the plaintiff "was not to look upon this decision in the light of a pension for life, but when able to work he must do it," was excellent. The knowledge of the fact that there is both medical and judicial warrant for a patient's belief that he is ill must not be construed as an opinion that he cannot get well. In the great majority of cases of neurasthenia if the sufferer is properly treated and helped to take a favourable view of his future, recovery ensues though possibly it may be long deferred.

THE CADGE MEMORIAL WINDOW.

ALTHOUGH the memory of Cadge of Norwich will ever be kept green in the minds of his professional brethren by his work, yet it was only fitting that his name should be perpetuated as a benefactor of his brethren by some visible memorial in the great cathedral of the city where he dwelt. Accordingly, soon after he died an appeal was made to medical men for funds for this purpose. The response was most gratifying, subscriptions being received not only from British medical men but also from many eminent continental surgeons, and it was decided that the memorial should take the form of a stained glass window. This was formally unveiled on Dec. 6th by the President of the Royal College of Surgeons of England, Mr. John Tweedy, in the presence of many medical men and members of the cathedral body. After a short office had been said Dr. M. Beverley requested Mr. Tweedy to unveil the window. This being done Mr. Tweedy delivered an oration upon the occasion which had called the company together, in the course of which he said that although it was neither the time nor the place to refer to the technical side of Mr. Cadge's career as a surgeon, yet it would not be inappropriate to notice other aspects. He reminded his audience how completely Mr. Cadge fulfilled the mediæval ideal of a surgeon by quoting from Guido de Chauliac: "The surgeon should be of kindly disposition, bold when sure, cautious

in danger, kindly to the sick, friendly with colleagues, temperate, sober, pitiful, not covetous, not greedy of gain." Mr. Cadge was always zealous for the dignity of his profession and his wide experience of life made him ever lean to the side of mercy. To know to what temptations men succumb is easy; to know those which they have resisted is difficult. Mr. Cadge was not a surgeon only; he had a full sense of his civic responsibilities and benevolence was with him a habit. Unceasingly did he cultivate the charities of life as citizen and friend, no less than as philanthropist and physician. The window was then formally dedicated by the Dean. The subject of the window is Our Lord healing the sick and it was executed by Messrs. Burlison and Grylls. Underneath it are placed two dedicatory tablets.

OVERCROWDING IN TRAINS.

DURING a Board of Trade inquiry which was held on Nov. 5th and 21st into the necessity for further workmen's trains on the London, Tilbury, and Southend Railway and the Whitechapel and Bow Railway some startling evidence was given as to the overcrowding of trains running over these companies' lines. The inquiry was held on the petition of the London County Council. Colonel H. A Yorke, chief inspecting officer of railways, Board of Trade, conducted the inquiry for the Board of Trade, while Mr. Dickens, K.C., and Mr. Corrie Grant appeared for the London County Council. The railway companies were represented by Mr. W. J. Noble. Observations had been made by the London County Council inspectors many times of the overcrowding and the result showed that things were now worse than ever. In one of the trains it was impossible to count the passengers accurately. The figures for this train showed that with accommodation for 942 passengers about 1680 passengers were carried. Mr. Dickens argued that by a rearrangement of the times of the trains it was possible to make additions to the service. There was a crying need for impro
Ham,
Park,
was terrible. We understand that Colonel Yorke will make his report to the Board of Trade in due course and when that is done we hope to see some practical benefit arise from the petition of the London County Council which, we are glad to see, is awake to the necessities of saving a section of Londoners from sufferings comparable only to those of some of the poor wretches who used to be confined under the hatches in the Arab slave dhows. We trust the day of emancipation may soon dawn and that it will not be said that though a company may not suffocate and squeeze a man to death in the daylight on the highway it may do so with impunity when it gets him underground in the dark

THE HOSPITAL ISOLATION OF SCARLET FEVER.

THE isolation of scarlet fever patients in special hospitals, whether such isolation be voluntary on the part of the family or enforced against their will, involves a multiplicity of debateable questions, some of which have been frequently referred to in THE LANCET. In our issues of August 27th (p. 624) and Nov. 5th (p. 1297), 1904, we recapitulated some arguments which have been of recent years urged against the system. We did not in these articles attempt to cover the whole ground and did not trace the opposition further back than a notice of a pamphlet by Mr. E. D. Marriott of Nottingham and letters of his published in THE LANCET of December, 1900. We have now, however, received a letter from Dr. F. Lucas Benham of Campden House, Exeter, South Australia, who, after referring to the above-mentioned article of August 27th, says that he has for a number of years interested himself in this question of isolation and reminds us that in THE LANCET of June 13th, 1896, p. 1672—

Dr. Benham when he wrote to us in 1896 was practising in Elizabeth-street, London, S.W. We may be allowed to add to the foregoing that in our issue of Oct. 23rd, 1897, p. 1040, Mr. Arthur Wiglesworth of Liverpool published under the heading of "Isolation in Scarlet Fever Unnecessary and Inexpedient" a long paper which he said "was read before the Liverpool Medical Society nearly four years ago."

"EKIRI," AN EPIDEMIC FORM OF INFANTILE DIARRHŒA IN JAPAN.

VARIOUS views have been expressed by Japanese physicians as to the pathogenesis of "ekiri," an acute and fatal form of epidemic diarrhœa. By some it has been regarded as a variety of acute epidemic meningitis, since the disease is usually associated with cerebral symptoms, especially in young children; by others it is regarded as a severe form of dysentery occurring in childhood and due to the bacillus of Shiga Recently it has been regarded as acute follicular enteritis. An interesting account of the disease with records of bacteriological investigations is given by Dr Sukehiko Ito of Fukuoka, Japan, in the *Archiv für Kinderheilkunde*, 1904, Band 39. The incubation period he estimates at from 12 to 24 hours from a careful study of 21 cases; this is followed by a prodromal stage and a fastigium. The characters of the prodromal stage are as follow. A previously healthy child evacuates copious loose offensive stools often admixed with undigested food and sometimes with a small quantity of mucus. The general condition of the child is depressed and the temperature rises to from 38° to 39° C. Occasionally abdominal pain and vomiting occur. In the fastigium the fever increases and the character of the stools changes to a watery mucus; the abdomen has a soft doughy feel. Later cerebral symptoms develop, unconsciousness with severe general tonic-clonic spasms being not infrequently followed by deep coma. The course of the disease is almost invariably acute and very frequently fatal. Recently an improvement in the recovery rate has occurred, but even now at least one-third of the children attacked by the disease succumb to it. Dr. Ito has isolated an organism from the stools of patients suffering from the disease which he regards as the pathogenic agent and to which he has given the name of the ekiri bacillus. Its microscopical features are closely similar to those of the bacillus coli communis. It is pathogenic for mice, guinea-pigs, rabbits, fowls, and pigeons, and it agglutinates with the serum of patients who have recovered from the disease and with that of animals immunised to it. It is not found in healthy people but only in cases of ekiri. The features of this disease seem to be very similar to those of the epidemic summer diarrhœa or cholera infantum of our own large towns and the cerebral symptoms are doubtless analogous to those occurring in that disease, and to which Marshall Hall applied the name of hydrocephaloid. The observations are of interest in this connexion, as if the ekiri bacillus prove on further investigation to be the cause of this disease in Japan, as the Shiga and Flexner bacilli have in other cases elsewhere, the differentiation of the

causal agent in cases of epidemic diarrhœa may become a matter of importance in relation to treatment, since apparently it is possible to immunise animals to the disease.

HAIR-BALLS IN A CHILD AGED FIVE YEARS.

IN the stomach or intestines of animals, such as the cow, which habitually lick the hairy surface of the skin it is not by any means rare to meet with masses of hair which have been formed by the aggregation of the numerous hairs swallowed. The churning action of the stomach felts these hairs together until rounded masses are formed which may attain a large size and ultimately may lead to intestinal obstruction. These hair-balls are rare in human beings and then generally occur in girls or women, especially in those of weak or unsound intellect. A case was reported in June of this year to the Société de Pédiatrie of Paris by Dr. Zuber, in which a boy of the age of five years passed three hairy masses. His history showed that he was breast-fed to the age of 12 months and had never had any digestive troubles. When he was between five and eight months old the child had developed the habit of pulling out his hair, so that at last he had only a tuft at the back of his head, and so his mother made him wear a cap continuously to cure him of the habit. He soon lost this trick and when seen he had a good head of hair. For a few weeks before he was seen he had suffered from colic with frequent and glairy motions and a slight feverishness. Abdominal palpation revealed nothing. After this attack had lasted some days he passed a blackish mass of hair which the mother threw away. Three weeks later he passed three small masses of hair and after that the diarrhœa ceased completely. The masses consisted of felted hairs, each hair being from three to five centimetres in length. The masses were of the shape of ordinary formed fæces. It appears probable that these ægropiles, as they have been called, had remained in the stomach or intestines from the first year of life when the boy was in the habit of pulling out his hair. It is of interest to note that his elder sister up to the age of two years was in the habit of eating pieces of wool which she pulled from her blankets and her mother had often found little woollen masses in the stools. This child, another sister, and the patient were all in the habit of chewing grass and paper, and the patient himself when two years old used to eat earth.

THE EVOLUTION OF MAN'S DIET.

A CORRESPONDENT writes: "The interesting and important history of the gradual development by the human race of the capability to utilise the various products of nature for the purpose of food, as set forth in the columns of THE LANCET by Dr. Harry Campbell, appears to have been a matter of tradition, doubtless for many centuries transmitted orally from generation to generation, among the early Hellenes, for more than one Greek poet has referred to it. A fragment of an elegiac poem found recently upon an Egyptian papyrus affords an instance of this. The poet is praising the happiness of humanity in primitive times when living in a state of nature previously to any serious competition for existence. The translation of the text, owing to some letters being obliterated, is extremely difficult and the following rendering is based upon that of the celebrated French Hellenist M. Weil:—

When mortals exchanged an easy life for one of labor's durance. They were about as senseless as was Glaukos, the Lycian, when he eagerly, the thoughtless one, accepted a suit of armour worth nine oxen in exchange for one valued at 100. Beforetime they forged not a pick n'or massive hatchet, n'or hoe, with two sharp teeth, in order to work; like a quarryman who pierces the mountain; to turn over the flinty earth. They cast not the grain into the furrow. They labored not with oxen the fallow land, gift of the Nile. Without work they possessed the oaks produced by the soil, and the acorns, man's most primitive food.

The author of the work from which these lines are preserved is unknown, but he was probably some cynic poet of Alexandria repeating the theories of Antisthenes and Diogenes. A far more elegant piece of literature upon the subject is contained in a little known fragment of Euphorion, to be found in the celebrated Didot edition of the shorter remains of lost classics, a portion of which runs as follows. It will be seen that the picture is not so idyllic as that given in the former quotation.

'There was a time when mortals lived like brutes
In caves, and unsecured hollows of the earth.
For, neither house n'or city, flanked with towers,
Had then been reared. No ploughshare cut the clod
To make it yield abundant harvest; n'or
Were vines ranked and trimmed with pruning knives,
But fruitless births, the sterile earth did bear.
Men on each other fed, with mutual slaughter.
For law was feeble, violence enthroned;
And to the strong the weaker fell a prey.'

The poet then describes the beginning of agriculture. Hesiod, as is well known to those who remember their classics, speaks of the gradual progress of humanity in much the same terms, though to him the best and golden age was ever that of the highest antiquity, and he considers things had altered decidedly for the worse. Speaking of man cultivating the soil and goading the ox at the plough as 'sweating under the labour by the gods imposed upon mankind,' some lines of his almost show us the Pelasgians, having entered Greece, changing from a hunting, or pastoral, into an agricultural people—

'Who settled near by the sea,
Or in the vale far from its foaming waves:
And at the foot of the gloomy ravine
Turned up the fruitful soil.'"

ANIMAL MEMBRANE IN THE TREATMENT OF GRANULATING WOUNDS.

Dr. Frederic Griffith of New York City recently read a paper before the Surgical Section of the New York Academy upon the healing of granulation wounds. Granulation, he says, is a mere excess of that which takes place after agglutination in a coapted incised wound and the process of granulation is somewhat as follows. "Until the end of 24 hours the various tissues can be distinguished, later the outline is obscured by the gelatinous lymph and by a process of fatty degeneration, the blood coagulum being entirely replaced. About the third day the wound cleft is found to be made up almost entirely of round cells, some intermediate substance, and the remains of the blood coagulum. Later come large epithelioid cells, being forerunners of granulation tissue formation and fibroblasts which change into the fibres of the fibrillar connective tissue. Some of these newly-formed cells become wandering cells and regeneration within the new formed tissue mass is likewise carried on by the fixed tissue cells. ..... The factor which above all else determines wound healing is the presence or absence of friction or, taken in its broadest sense, irritation." Dr. Griffith went on to say that oil-silk or rubber tissue being waterproof when applied to a wound formed an ideal nidus for germs; even if rubber tissue were applied shingle fashion the fact remains that rubber is not an animal tissue and so cannot react to the progressive changes of regeneration in the wounded tissues. The use of the peritoneum of the ox, known as Cargile membrane or, on this side of the Atlantic, gold-beaters' skin, marked, in Dr. Griffith's opinion, an epoch in the treatment of granulating wounds and the main object of his paper was to draw the attention of his audience to another animal membrane—namely, the "gastro-intestinal mesenteric attachments of the sand shark, *carcharias littoralis*." An ordinary sized fish would supply two or three square feet of this almost gossamer but tough material which, even when kept in alcohol for ten weeks, underwent no apparent change but an increase in toughness. The membrane was transparent. It might be worth while for

English surgeons to make a trial of a similar material in lieu of gold beaters skin which has been used and doubtless plenty could be secured from the dog fish which are now so abundant off the Cornish coast

DR DOYEN AND CANCER RESEARCH

IN January, 1902,[1] it may be remembered, our Paris correspondent was able to report that the French Academy of Medicine had been considering a paper laid before it by Dr Doyen, in which that eminent surgeon announced the constant presence in cancerous tumours of a new microbe which he had been able to isolate and cultivate Subcutaneous injection of the toxin of this microbe, attenuated in a special manner, he found to bring about a reaction similar to that produced in tuberculous glands by tuberculin, but further information as to his methods was not at that time made public, Dr Doyen himself agreeing that the results of post operative injection of the toxin must be tested and confirmed A special meeting of the French Society of Surgery was held on Wednesday night last at which a report was read signed by Professor Metchnikoff and other independent observers This report is understood to have been in certain directions favourable to Dr Doyen s claims, but it is unnecessary to remind medical men that this does not imply, as the lay papers would have the public believe, "the discovery of the bacillus of cancer The pathological research of the past two years has been directed mainly to discovering in developmental defaults the essential reason of malignant disease, so that Dr Doyen s work, when it can be made public with sufficient detail to enable our readers to appreciate it, will appear at a very interesting time

THE HYGIENE OF HAIRDRESSERS

WE have on a previous occasion drawn attention to the many dangers which lurk in the methods of hairdressing and shaving as ordinarily practised We also mentioned that the medical officer of the Corporation of the City of London was endeavouring to obtain the sanction of the corporation to the laying down of regulations for the more hygienic management of hairdressers' establishments We have received a copy of the rules which it is intended to introduce They have been drawn up by the Incorporated Guild of Hairdressers, Wigmakers, and Perfumers, in conjunction with the medical officer of health of the City of London We have already mentioned the chief points in these rules and now need only repeat that they form an attempt to limit as much as possible the transference of germs from the hairdresser to his clients or from one client to another The scissors, razors, combs, clippers, and shaving brushes have to be placed in a disinfecting solution after use, no suggestion is given as to the time during which they are to remain in the disinfecting solution, though this is naturally of great importance The disinfectants recommended are cyllin solution in the proportion of one teaspoonful of cyllin in one quart of water, or izal solution in the proportion of one teaspoonful of izal in one pint of water We welcome this excellent attempt to introduce hygiene into a business where it was unknown previously, so far as concerns this country at least Doubtless time will show many points in which experience will suggest improvements but the Corporation of the City of London and its medical officer, Dr William Collingridge, deserve great credit for the action which they have taken

THE medical officer of health of Cape Colony states that for the week ending Nov 19th the conditions as regards plague in the colony were as follows At Port Elizabeth four cases were discovered during the week—namely, two European males and two native males Plague infected rodents were also found At East London plague infected rodents were found In the Cape Town district including the harbour and the shipping, 1052 rodents were examined but none was affected with plague In other districts no case of plague in man or animal was discovered As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Dec 10th states that for the week ending Dec 8th there were 25 cases of plague and 14 deaths from the disease

Sir Oliver Lodge, in a note read before the Royal Society at the meeting held on Dec 8th—on a Means of Producing a High voltage Continuous or "Pertinacious" Current—has hinted at a method of storing the intermittent high potential discharges of a Ruhmkorff coil in reservoirs whence they can be discharged continuously through any high resistance We hope that when details of the method are made known it may be found useful in certain medical applications of electricity, as for instance, in x ray work, and to replace statical machines in treatment

THE next ordinary meeting of the Royal Meteorological Society will be held at the Institution of Civil Engineers, Great George street, Westminster, S W, on Wednesday, Dec 21st at 7 30 P M, when the discussion will be taken on Mr F J Brodie s paper, Decrease of Fog in London during Recent Years and the following paper will be read The Study of the Minor Fluctuations of Atmospheric Pressure, by Dr W N Shaw and Mr W H Dines

NEWS has been received from Melbourne of the death on Dec 10th of Dr D Astley Gresswell, chairman of the Board of Public Health of Victoria Dr Gresswell belonged to a Lincolnshire family and graduated at Oxford as M B in 1881 and M D in 1889 He was also admitted M D Melb in 1890

AT a meeting of the Royal Microscopical Society to be held at 20, Hanover square, London, W, on Wednesday, Dec 21st at 8 P M, Mr J W Gordon will read a paper on the Theory of Highly Magnified Images

Lord Rayleigh, with great generosity, proposes to present to the University of Cambridge the amount of the Nobel prize for physics which has just been awarded to him

THE Right Hon Joseph Chamberlain, M P, will preside at a banquet in London on May 10th next on behalf of the London School of Tropical Medicine

SOCIETY OF CHEMIST OPTICIANS—The opening meeting of this society was recently held in the lecture theatre of the Pharmaceutical Society, Mr C J Garibaldi Bunker, the president of the society, being in the chair A lantern lecture was delivered by a gentleman who had made discoveries when in Australia, where he had ascertained statistically that at one of the State schools nearly 70 per cent of the children had defects of vision Mr A Higgs moved a vote of thanks, in the course of which, if we may trust the printed report which lies before us, he said that medical men knew little about eye testing The motion was formally seconded by Mr Julius Cæsar and passed with acclamation Mr Garibaldi Bunker, Mr Higgs, and Mr Julius Cæsar evidently intend to make war upon the medical profession

[1] THE LANCET, Jan. 11th, 1902, p 126

THE STATISTICAL REPORT ON THE HEALTH OF THE NAVY FOR 1903.

THE report on the health of the Royal Navy for 1903, which has been issued recently, is a very satisfactory one. The total force serving afloat, corrected for time, in that year was 103,100. With an increased *personnel* of 3500 as compared with the previous year there are decreases in the ratio of cases, invalidings, and deaths both as contrasted with the previous year and with the average for the last six years. Taking the total death-rate, by way of a notable example, it is 4·19 per 1000, which is the lowest for nearly 50 years—namely, since 1856; that from disease alone during 1903 was only 2·79, which is 0·72 less per 1000 than for the preceding year. Only two wounds in action are recorded with one death which occurred on the East India station when the *Mohawk* landed a force to punish the chief of the village at Durbo, in the Italian Somaliland. The aggregate number of cases of disease and injury recorded in 1903 furnishes a reduced ratio of 831·57 per 1000. All the stations show a reduction in the ratio of cases per 1000 of force except the South-east Coast of America, Cape of Good Hope and West Coast of Africa stations, where the results do not show altogether so favourably in this respect. The highest invaliding rate was on the North America and West Indies station and the highest death-rate was in the East Indies. The invaliding ratio of the total force (24·03 per 1000) shows a decrease of 5·93 as compared with 1902, also a decrease of 6·94 in comparison with the average for the last six years.

There were only three cases of small-pox in 1903. The cases of enteric fever show a slight increase of 0·15 per 1000, but the deaths during the year were fewer by seven than in the preceding year. Ten cases of plague are recorded as having occurred on the China station, none of which proved fatal. There was only one case of cholera. Among the general diseases we may also notice, without going any further into the results of the statistical calculations set forth in the report, Mediterranean fever, malarial fevers, dysentery, septic diseases, tubercle, and venereal diseases as being among the main contributions to the totals. The Mediterranean station showed the lowest sick-rate and the irregular force the highest. There were 17,295 cases of wounds and injuries and 129 deaths. The fatal cases are classified under different heads according to the various causes to which they were attributable—such as burns and scalds, heat-stroke, multiple injury, drowning, and so forth. The local injuries furnished 15,605 cases. 16 men committed suicide. A table (No. 4) in the medical statistical returns of the total force shows the ratio per 1000 of force of all classes of disease and injury entered on the sick list as well as of the invaliding and mortality from the different classes of disease and injury on the various stations during the year.

With regard to the remarks on the various stations we can only refer to a very few. We may say that the report for 1903 strikes us as being on the whole one of the best annual reports of the series, especially as regards the papers published in its appendix. Under the heading of the Mediterranean Station, in the remarks on influenza a brief history is given of the epidemic in connexion with H.M.S. *Diana*, followed by other short statements in regard to enteric, Mediterranean, and malarial forms of fever. On the South-east Coast of America station (now called the South Atlantic station), where the mean strength of the force was relatively small and where there was a considerable amount of sickness in 1903, the increase in the case ratio is mainly to be accounted for by an outbreak of enteric fever and simple continued fever in the *Cambrian*, and the surgeon of that vessel gives a brief history of the circumstances and causes of this outbreak. It may be remarked that, in spite of this occurrence, there was nevertheless a great decrease in the invalidings as compared with the previous year. The remarks under the headings of the other stations—those of the Cape of Good Hope and West Coast of Africa, East Indies, China, and Australia for instance—are brief, pertinent, and explanatory of the facts.

The appendix to the report with its accompanying charts covers about 80 pages and contains 14 separate papers dealing with subjects of much interest to medical officers of the public services and to students of tropical and subtropical diseases, especially with those diseases prevailing at Malta and in the Levant. All these contributions are worth reading; some of them consist of exhaustive inquiries and observations, and a few are of much scientific and clinical value as recording the results of good work independently undertaken in these directions.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Dec. 8th, Sir W. S CHURCH, Bart., the President, being in the chair.

The PRESIDENT announced that he had nominated Dr. G. R. Murray to be the Bradshaw lecturer for 1905.

The following Fellows were, on the nomination of the PRESIDENT, elected to attend as delegates of the College at the Conference of the Sanitary Institute on School Hygiene in February next: The President and Sir Lauder Brunton.

The following communications were received:—

1. From the secretary of the Royal College of Surgeons of England reporting the proceedings of its Council on Nov. 10th.

2. From the secretary of the Royal Commission on the Care and Control of the Feeble-minded. After a brief discussion, in which Dr. FLETCHER BEACH, Sir W. R. GOWERS, and the PRESIDENT took part, it was resolved to appoint a committee to report upon the answer which should be returned to the communication of the Commission. The following Fellows were elected to serve on the committee, the President, Dr. Fletcher Beach, Dr. Sidney Coupland, Dr. H. G. Savage, Dr. D. Ferrier, Dr. W. J. Mickle, and Dr. C. A. Mercier.

3. From the Clerk of the Privy Council, forwarding, by direction of the Lord President, a note received from the Portuguese Legation, expressing the desire of their Government that the British Government should be represented by special delegates at the International Congress on Medicine to be held at Lisbon, April 19th to 26th, 1906. The nomination of the delegates was postponed.

4. From Dr. W. R. Smith, President of the Royal Institute of Public Health, inviting the College to send delegates to a congress of the institute to be held in London, July 19th to 25th, 1905, with special reference to school hygiene. After some discussion it was unanimously resolved that the communication lie upon the table.

The REGISTRAR moved that on the occasion of the examination for the Membership in April, 1905, the regulation appended to by-law cxv. be suspended. This regulation requires that the examination should commence on the last Tuesday but one in April—i.e., on the 18th in 1905—but as this would bring the meetings of the censors' board into Easter week by the adoption of the above proposal the examination will now begin a week earlier—viz., on April 11th.—The proposal was adopted.

ASYLUM REPORTS.

London County Asylum, Claybury (Report for the Year ending March 31st, 1904).—The average number of patients resident during the year was 2398, comprising 994 males and 1404 females. The admissions during the year amounted to 607—viz., 296 males and 311 females. Of these 546 were first admissions. Dr. Robert Jones, the medical superintendent, states in his report that the number of admissions and the total number under treatment have been higher than in any of the previous five years. The transfer of male epileptics to the epileptic colony at Ewell has removed from Claybury all the outdoor working epileptic patients. Of the 607 patients admitted over 20 per cent. were more than 60 years of age. "I think," adds Dr. Jones, "that the stresses of life which become each year more exacting without a corresponding physical improvement are responsible for much presenile insanity or a premature mental breakdown at the critical periods of life. Senile insanity is a chronic and helpless form of insanity, full of trouble and anxiety to those responsible for its treatment. It is more marked than any other by accidents and by the slighter forms of casualties, which disturb the confidence of the friends and which occur in spite of the

most constant and careful supervision." General paralysis occurred in 14·5 per cent. of the men and 4·8 per cent. of the women admitted. The prevailing form of insanity was more of the depressed than of the excited type and there were among the men three times the number of acute cases of melancholia as compared with corresponding cases of mania. Of the causes of insanity previous attacks were responsible as a predisposing cause for 25 per cent. of the admissions. Hereditary influence was ascertained in a similar proportion of cases and alcohol as a direct or indirect factor also figured highly. "Alcohol affected the well-being of others besides the patients, for 70 per cent. of the men and 80 per cent. of the women had families dependent upon them, and of the men in this class 30 per cent. were skilled handicraftsmen." The number of patients discharged as recovered during the year amounted to 193—viz., 84 males and 109 females, or 8 per cent. of the average number resident. The deaths during the year amounted to 198, or 8·2 per cent. as calculated on the same basis. Of the deaths five were due to senile decay, six to epilepsy, 18 to pneumonia, 21 to dysentery, 26 to pulmonary and other forms of tuberculosis, 32 to cardiac disease, 45 to general paralysis of the insane, and the rest to other causes. Six females admitted whilst pregnant were delivered of infants in the asylum. Four of the mothers recovered sufficiently to be discharged. No suicides occurred during the year. The Commissioners in Lunacy state in their report that the wards and dormitories were in excellent order, that the bedding was in good condition, that the condition of the patients was satisfactory as regards dress and personal appearance, and that the medical records and case-books were well kept. "The result of our thorough inspection of this large asylum," add the Commissioners, "is that we are well satisfied with its management and the treatment of the patients, which reflects credit upon Dr. Jones, the medical superintendent." The expenditure on repairs, alterations, and improvements amounted during the year to £9202

London [illegible] *the Year ending Ma* [illegible] patients resident d[illegible] 17 males and 1207 f[illegible] amounted to 382—viz., 189 males and 193 females. Of these, 361 were first admissions. Mr. James M. Moody, the medical superintendent, states in his report that the admissions continue to be of an unfavourable type. "A large proportion of the cases were of a hopeless character and many were in an exceedingly feeble condition, several succumbing within a short period after admission." Two patients admitted whilst pregnant were each safely delivered of a female child. One of these patients has since been removed to another asylum. The chief causes of insanit[illegible] previous attacks, domestic [illegible] alcoholic intemperance, and [illegible] frequency. The number of [illegible] during the year amounted to 120—viz., 51 males and 69 females, or 5·6 per cent. of the average number resident. The deaths during the year amounted to 137, or 6·4 per cent. as calculated on the same basis. Of the deaths, six were due to cancer, eight to renal disease, 13 to pneumonia, 14 to pulmonary and other forms of tuberculosis, 18 to cardiac disease, 29 to general paralysis, and the rest to other causes. Four inquests have been held during the year, a verdict of "Death from natural causes" being returned in each case. The general health of the inmates has upon the whole been good and the death-rate is the lowest recorded since the opening of the institution. "In the early part of the year influenza appeared. In the female division it was of a somewhat virulent character, [illegible] pneumonia. On [illegible] but in no case [illegible] Lunacy had not visited the asylum during the year under review. The committee of management states in its report that in connexion with the arrangements for dealing with an outbreak of fire the following measures have been carried out. The connecting of the East Surrey Water Company's main with that of the asylum has been completed and the pressure of the augmented supply is sufficient to carry water over the highest building when all the usual services are in use. The fire-alarm system has been extended to include the cottage hospitals, the garden, and farmhouses. Upon representation being made to the Croydon rural district council it has fixed at its expense a fire-hydrant on the East Surrey Water Company's mains for the better protection of the attendants' cottages. The farm account shows a credit balance on the year's working of £395. The expenditure for repairs, alterations, and improvements during the year amounted to £6518.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 16, 1826.

To the Editor of THE LANCET.

SIR,—When candidates pass their examination at the Royal College of Surgeons, I believe they make oath to preserve the honour and dignity of the profession, &c.; and if I recollect right, for any egregious violations of its decency and decorum, they subject themselves to be struck from the list of its Members. Now, if this be the case, what *urveillance* and *natchfulness* [illegible] gentlemen who compose the [illegible] I repeat, what does it not argue, when we see blazoned forth in every newspaper, the nauseous and disgusting paragraphs of those *quacks* in Bouverie Street, Bridge Street, Adelphi, Norfolk Street, &c., styling themselves *Members* of the *Royal College of Surgeons*.

Is it not a disgrace to be in any way connected with such a body? The question is an idle one—as the *thing* is at present constituted, we know that it is, and we also know that there is little hope of reformation.

I am perfectly aware, Mr. Editor, that what I have here complained of, will, (as we say at school,) long ere it reach *Olympus*, be scattered in empty air—but there is yet another saying, which may apologise for this intrusion, "Gutta cavat lapidem."

I am, Sir,
Your very obedient servant,
A. Z.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 8th, Mr. JOHN TWEEDY, the President, being in the chair. The secretary reported the death, on Oct. 20th, of Professor Paul Tillaux of Paris, Honorary Fellow of the College.

Diplomas of Fellowship were directed to be issued to 29 successful candidates. It was resolved that diplomas in dental surgery should be issued to 40 successful candidates. In response to a petition from 264 dental students and in accordance with a recommendation from the Board of Examiners in Dental Surgery it was resolved that a syllabus of anatomy, physiology, and surgery should be issued, and the Board was requested to prepare such a syllabus. A report was received from the Committee appointed to consider the proposed system of school certificates; this was adopted and it was resolved that an answer should be sent expressing general approval of the scheme.

Mr. Bernard Pitts was re-elected a member of the Court of Examiners.

The resolutions carried at the annual meeting of Fellows and Members were reported to the Council. With regard to the first resolution a discussion was held and it was ultimately resolved that the further consideration of the matter should be postponed, and that the mover and the seconder of the resolution should be informed of this, and that the result of the further consideration would be communicated to them in due course. With regard to the second and third resolutions it was considered that they did not call for any answer from the Council.

A letter was read from Dr. Norman Moore, reporting on behalf of Mr. Henry Morris the proceedings of the General Medical Council at its late session in regard to matters of interest to the College. The best thanks of the Council were given to Dr. Norman Moore for the services kindly rendered by him to the Council in the absence of Mr. Henry Morris.

The PRESIDENT reported the delivery of the Bradshaw lecture by Mr. A. W. Mayo Robson, the subject of the

lecture being Cancer and its Treatment. The best thanks of the Council were given to Mr. Mayo Robson for his lecture and he was requested to publish it.

The PRESIDENT reported that he had unveiled a window in Norwich Cathedral erected in memory of the late Mr. William Cadge, F.R.C.S.

MEDICINE AND THE LAW.

Medical Men and the "Police Call."

A CORRESPONDENT asks "whose duty it is to see that the medical practitioner is paid in the case of a police call," and further inquires "whether the police are justified in referring the medical man to the patient's friends or relatives for payment." He suggests that it is the duty of the police "to forward a certificate for the payment of the fee to the medical practitioner called" and that even if the relatives undertake the payment of the fee it is not for the medical man to undertake the collection of it. The question of who is to pay the medical practitioner who at the instance of the police attends to a person in need of his aid is one which often arises and from the point of view of the medical man it is unjust that he should be summoned, perhaps from his hardly earned rest, to attend upon a patient who either will not be able to pay him or who will deny his liability to do so and at the same time to find that the police authorities also refuse to acknowledge the debt as theirs. It is a hardship and it is one for which it is not easy to suggest a remedy unless medical men sitting upon the local bodies which control the funds placed at the disposal of chief constables see their way to devise one and to carry it into practice. The legal position can be best appreciated by imagining a concrete case. A policeman on his beat finds a tramp apparently dying from disease or from a serious wound in the road 100 yards from the house of a medical man and a mile or two from the nearest hospital or workhouse infirmary. If the policeman leaves the man to die without summoning medical aid he will be censured, perhaps by medical men, for his inhumanity. He, however, goes to the house of the practitioner who lives close by and asks him to come. The medical man may either go at once without question or he may consider these points. The tramp will not be able to pay him and his relatives, if they can be found, will probably refuse to do so and cannot be compelled to accept the liability. They certainly do not summon him or enter into any undertaking to remunerate him. The policeman calls on him to attend but the policeman is not authorised to pledge the credit of his superior officers or of the fund out of which he draws his pay for the supply of medical aid to persons, tramps or otherwise, found in need of it upon the highway. The policeman is not offering to make himself personally liable and if asked definitely to do so would naturally decline. It is doubtful also whether the persons intrusted with the finance of the police force would legally be justified in spending money with such an object. The police, incidentally to their duties in preventing or detecting crime, summon the medical man in order to save a life apparently in danger or to allay suffering. The medical man, incidentally to his profession, from which he earns, or endeavours to earn, a living, is called upon to exercise his professional skill without hope of reward or with but scanty expectation of any adequate remuneration. If he refuses to go his neighbours, should they hear of it, will say hard things of him, as they would have done of the constable if he had failed "to call a doctor." If he goes they probably will hear nothing of the matter and he will, almost certainly, have performed a charitable act without thanks from anyone, for even the person relieved may be expected to evince no gratitude towards him. The situation is an extremely unpleasant one, for those who do charitable acts in other spheres of life at least can choose the objects of their benevolence. There is, however, as a matter of fact, great difficulty in suggesting a remedy which local authorities are likely to put into practice, and the response, made gratis, to the "police call" seems likely to remain among the deeds of kindness done by the medical profession, to their own cost in time and labour, not only without any reward or compensation but without praise or congratulation. The average member of the public would say of the medical man in the circumstances imagined, "Of course he goes; he would be a callous brute if he did not." He does not reflect, however, on what his own feelings would be if he were expected suddenly to exercise his own profession or business at any hour of day or night on behalf of a needy stranger who would probably be found ungrateful and undeserving. Whatever remedy, however, anyone may be able to suggest for the existing state of things, it is certain that at present it is not anyone's "duty to see that the medical practitioner is paid." We would that it were so.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: E. H. Meaden to the *Fire Queen*, additional, to be lent to the *Apollo* and then to the *Brilliant;* and J. C. F. Whicher to the *Brilliant* on recommissioning.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. R. Mallins, retires on retired pay (dated Dec. 14th, 1904). Lieutenant F. H. Noke is confirmed in his rank.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement from the service of the undermentioned officers:—Lieutenant-Colonel Frederick Robert Swaine (dated Nov. 1st, 1904) and Lieutenant-Colonel Shibram Borah (dated Sept. 10th, 1904).

IMPERIAL YEOMANRY.

Middlesex (Duke of Cambridge's Hussars): Herbert Meggitt to be extra Surgeon-Lieutenant under paragraph 30 Yeomanry Regulations (dated Nov. 26th, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain W. B. Cockill to be Surgeon-Major (dated Nov. 26th, 1904); Surgeon-Captain T. E. Stuart to be Surgeon-Major (dated Nov. 26th, 1904).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cornwall (Duke of Cornwall's): Surgeon-Captain R. G. Nesbitt to be Surgeon-Major (dated Dec. 10th, 1904). 1st Lanarkshire: Surgeon-Lieutenant-Colonel J. Provan retires under paragraph 103, Volunteer Regulations, and is granted the honorary rank of Surgeon-Colonel, with permission to wear the prescribed uniform (dated Dec. 10th, 1904). *Rifle:* 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant J. A. Angus to be Surgeon-Captain (dated Dec. 10th, 1904). 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment): Supernumerary Surgeon-Major (Brigade-Surgeon-Lieutenant-Colonel) W. D. Waterhouse (Senior Medical Officer, 2nd London Volunteer Infantry Brigade) to be Surgeon-Lieutenant-Colonel (dated Dec. 10th, 1904). 2nd Volunteer Battalion the Loyal North Lancashire Regiment: Surgeon-Lieutenant F. Robinson resigns his commission and is appointed Second Lieutenant (dated Dec. 10th, 1904). 13th Middlesex (Queen's Westminster): The undermentioned officers resign their commissions:—Surgeon-Captain B. L. Stivens (dated Dec. 10th, 1904) and Surgeon-Captain J. S. Hudson (dated Dec. 10th, 1904). 18th Middlesex: Surgeon-Major C. Godson to be Surgeon-Lieutenant-Colonel (dated Dec. 10th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: Lieutenant J. Bruce to be Captain (dated Dec. 10th, 1904). Lancashire Fusilier Bearer Company: Surgeon-Captain R. Mitchell to be Surgeon-Major (dated Dec. 10th, 1904).

THE TIBET MISSION.

Mentioned in Despatches.

Major A. R. Aldridge, R.A.M.C., Lieutenant-Colonel L. A. Waddell, C.I.E., I.M.S., Major C. N. C. Wimberley, I.M.S., and Captain T. B. Kelly, I.M.S., are mentioned in a despatch relating to the Tibet expedition published in the *London Gazette* of Dec. 13th. The document contains the following paragraphs: "The peculiar climatic and physical conditions threw an additional strain on the medical department. But all requirements were met and the force maintained in good health throughout the operations.

The total number of deaths and men invalided, excluding war casualties, was 411 and 671 respectively, and of these numbers 202 and 405 were more or less due to the special climatic conditions In addition to the above 160 wounded from among our forces had to be cared for, exclusive of a large number of Tibetan wounded who also received medical attendance That everything worked so well reflects great credit on this department" "The work which fell to the troops had to be carried out in the face of physical difficulties which subjected them to the severest hardships and privations, and these became in [illegible] ured their destination Notwithstanding [illegible] supplemented as they were by [illegible] lertaking was carried through in so successful a manner as to constitute it a highly creditable achievement"

DRINKING WATER FOR SAILORS

During the last few years, says Dr Le Méhauté in the *Archives de Médecine Navale* for September, naval hygiene has made great progress and considerable amelioration has taken place in everything that concerns the well being as well as the health of the men who have to pass the greater part of their time afloat Among the questions which chiefly occupy the attention of sanitarians that of potable water stands in the front rank The purity of drinking water is important on land but it is still more so at sea where nothing is more intimately connected with the efficiency and freedom from disease of a ships company than the water supply When an epidemic due to impure water breaks out in a town or village the inhabitants can adopt those measures which seem good to them individually for the protection of themselves and their families There are many courses open to them, including the radical one of flight, but afloat those who are exposed to the infection can do but little If the water supply on board a ship should unfortunately become contaminated the health of the entire crew is endangered The men have no means of safeguarding themselves For this reason it is of the first necessity that the water provided for drinking purposes at sea should be fresh and limpid, pleasant to the taste, and perfectly free from noxious germs In this brief formula all the essential points are comprised, but unfortunately it cannot be said to be universally applicable throughout the French navy Notwithstanding all the attention that has been devoted to the subject and in spite of the numerous remedial measures proposed by naval medical officers, many of which have been adopted, the appliances for the storage and distribution of potable water still leave something to be desired in some French war vessels Dr Le Méhauté proposes to substitute water that has been sterilised by heat for the distilled water at present used, the latter, in his opinion, being open to many grave objections including excessive costliness To install the system which he proposes would cost very little, as the existing pipes and reservoirs could be utilised The only innovation would be the sterliser which should be placed between the storage tanks and the distributing fountains Towards the end of his article (first part) Dr Le Méhauté describes and illustrates a fountain which he has invented in order to enable each individual to have a separate drinking utensil This fountain consists of a semi cylindrical receptacle of copper fixed at a convenient height and fitted with five tubes which close by means of taps When a sailor wants to drink all he has to do is to affix a sterilised mouthpiece, which he finds in a suitable dish, to the end of one of the tubes and to apply his lips to it precisely like a baby with a bottle He then turns the tap and sucks until his thirst is assuaged As soon as this object is achieved he has to close the tap and throw his [illegible] and also to make sure that a supply of these is forthcoming when required

THE ARMY MEDICAL RESERVE

Mr George Stoker, C M G, in a letter to the *Times* of Dec 8th pleads for "an efficient and adequate reserve for the Army Medical Service The Army Medical Service has been greatly improved in many ways and no doubt much that still remains to be done in this direction will eventually be accomplished, but, be it ever so perfect, an Army Medical Service sufficient for peace requirements can never meet the exigencies of a great war" The scheme for an Army Medical Reserve of which he gives an outline "consists in the organisation of a system which shall embrace a number of units called civilian auxiliary hospitals, to be set on foot in times of peace and called out for service in times of war and stress These hospitals would [illegible] rated to, the general [illegible] institutions would [illegible] efficient physicians, surgeons, and nurses"

THE AMIR OF AFGHANISTAN AND HIS ARMY

Our readers may be glad to have their attention directed to an article in the *Fortnightly Review* for this month on "The Awakening of Afghanistan," in which there is an interesting reference to the beneficial medico political influence of such services as that rendered by Major Bird, I M S, by his journey to Cabul and his successful treatment of the Amir The paper is well worth reading as a whole, for it gives a good picture of the relations existing between the Amir and the Indian Government and how these may be best strengthened and developed for the mutual benefit of both

THE WAR IN THE FAR EAST

The only important war news to be recorded concerns Port Arthur and what practically amounts to the total destruction of the Russian fleet there The capture of 203 Metre Hill by the Japanese, which gave rise to heavy losses on both sides, has been followed by the evacuation of several adjoining positions on the part of the Russians and it is to be hoped that there will soon be an end to further futile fighting and carnage in this direction When the Baltic Fleet arrives at Port Arthur, if it ever does it seems certain that it will get no aid from the once splendid fleet in the Pacific and cannot count upon the harbour and fortress as a shelter and naval base of operations From Manchuria there is no news of importance The temperature on the Shaho is 20° below zero but according to official accounts from Tokio the Japanese forces being amply supplied with warm clothing are standing the cold very well and are in a satisfactory state of health With regard to the Russians, the reports about their health and hospital and medical arrangements generally are conflicting According to the description given by Major Seaman, medical officer of the United States army, he found a striking difference between the health conditions and medical arrangements of the two armies, those on the Russian side contrasting very unfavourably in those respects with those obtaining in the Japanese armies Nor does Major Seaman stand alone in this view, for Dr Dvoretzky of Moscow has recently described the shortcomings and limited authority of the Russian army medical service There is evidently a strong feeling in Moscow that the very favourable health reports which have been published by the Russian Government do not represent the real state of affairs at the seat of war

The Russian hospital ship *Orel*, the equipment of which has been conjointly carried out by the Russian and French Red Cross Societies has arrived at the Cape The hospital staff includes 80 nurses and the vessel is provided with a number of boats and launches intended for the removal and succour of the wounded in case of a naval action

The advices of the Russian Red Cross Society mention a large number of cases of mental trouble in the army, says the *Novoe Vremya* These cases are sent to Moscow or to St Petersburg where they might be properly attended to if these towns would not delay in the construction of suitable infirmaries For this purpose there have been 2,500,000 roubles available for several years, but although this sum has been gathering interest no hospitals have been built for the insane

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 7718 births and 5426 deaths were registered during the week ending Dec 10th The annual rate of mortality in these towns, which had been 16 6, 17 3, and 21 6 per 1000 in the three preceding weeks, declined again last week to 18 5 per 1000 In London the death rate was 18 1 per 1000, while it averaged 18 7 in the 75 other large towns. The lowest death-rates in these towns were 8 9 in Bournemouth, 9 5 in Smethwick, 10 4 in Aston Manor, 10 9 in Hornsey, 11 7 in Kings Norton and in Newport (Mon), 11 8 in Devonport, and 12 0 in Northampton and in West

Hartlepool; the highest rates were 23·2 in Manchester and in Wigan, 23·3 in Plymouth, 23·6 in Tynemouth, 23·9 in Reading, 24·5 in Hanley and in Newcastle-upon-Tyne, 25·0 in Salford, and 26·2 in Walsall. The 5426 deaths in these towns last week included 438 which were referred to the principal infectious diseases, against 444, 400, and 482 in the three preceding weeks; of these 438 deaths, 136 resulted from measles, 80 from diphtheria, 71 from whooping-cough, 53 from diarrhœa, 50 from scarlet fever, 47 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was registered last week in Hastings, Southampton, Reading, King's Norton, Smethwick, or Rotherham; while they caused the highest death-rates in Plymouth, Hanley, Wallasey, Wigan, Salford, Burnley, York, Stockton-on-Tees, South Shields, and Gateshead. The greatest proportional mortality from measles occurred in Liverpool, Wigan, Salford, Burnley, Middlesbrough, South Shields, Gateshead, and Tynemouth; from scarlet fever in Devonport, Warrington, and York; from diphtheria in Brighton and Wallasey; from whooping-cough in Wigan, Preston, and Barrow-in-Furness; from "fever" in Rhondda; and from diarrhœa in Plymouth, Oldham, and West Hartlepool. One fatal case of small-pox was registered in Hanley but none in any other of the 76 large towns. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been one, one, and three at the end of the three preceding weeks, had risen to four at the end of last week; one new case was admitted during the week, against two cases in each of the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, the 10th inst., was 2490, against 2774, 2741, and 2625 on the three preceding Saturdays; 263 new cases were admitted during the week, against 259, 262, and 247 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 361, 385, and 565 in the three preceding weeks, declined again last week to 448 but were 30 in excess of the number in the corresponding period of last year. Influenza was stated to be the primary cause of 30 deaths in London last week, against 18, 30, and 26 in the three preceding weeks. The causes of 66, or 1·2 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Leicester, Salford, Leeds, Cardiff, and in 40 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, Hull, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·3, 18·0, and 21·2 per 1000 in the three preceding weeks, declined again to 19·7 per 1000 during the week ending Dec. 10th, but was 1·2 per 1000 above the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·3 in Perth and 13·0 in Leith to 19·2 in Paisley and 23·1 in Glasgow. The 653 deaths in these towns included 38 which were referred to whooping-cough, 15 to diarrhœa, 10 to measles, three to diphtheria, one to scarlet fever, and one to "fever." In all, 68 deaths resulted from these principal infectious diseases last week, against 47, 60, and 71 in the three preceding weeks. These 68 deaths were equal to an annual rate of 2·1 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 19, 21, and 34 in the three preceding weeks, further rose last week to 38, of which 32 occurred in Glasgow, three in Edinburgh, and two in Dundee. The deaths from diarrhœa, which had been 19, 18, and ten in the three preceding weeks, rose again to 15 last week and included six in Glasgow, three in Edinburgh, three in Dundee, and two in Aberdeen. The fatal cases of measles, which had been five, eight, and 16 in the three preceding weeks, declined again last week to ten, of which seven were registered in Aberdeen and two in Glasgow. The deaths from diphtheria, which had been nine and six in the two preceding weeks, further declined last week to three and included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 154, 174, and 190 in the three preceding weeks, further rose last week to 204 and were 12 in excess of the number in the corresponding period of last year. The causes of 16, or more than 2 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·2, 22·6, and 27·0 per 1000 in the three preceding weeks, declined to 25·2 per 1000 during the week ending Dec. 10th. During the past four weeks the death-rate has averaged 24·8 per 1000, the rates during the same period being 18·4 in London and 16·4 in Edinburgh. The 183 deaths of persons belonging to Dublin registered during the week under notice included 14 which were referred to the principal infectious diseases, against 21 and 20 in the two preceding weeks; of these, 10 resulted from measles, two from "fever," one from scarlet fever, and one from diarrhœa, but not any from small-pox, from diphtheria, or from whooping-cough. These 14 deaths were equal to an annual rate of 1·9 per 1000, the death-rates last week from the principal infectious diseases being 1·1 in London and 0·9 in Edinburgh. The fatal cases of measles, which had been eight, 12, and 12 in the three preceding weeks, declined again last week to ten. The 183 deaths in Dublin last week included 35 of children under one year of age and 47 of persons aged 60 years and upwards; the deaths of infants were slightly in excess of the number in the preceding week, while those of elderly persons showed a decline. Four inquest cases and two deaths from violence were registered; and 74, or more than two-fifths, of the deaths occurred in public institutions. The causes of seven, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1904.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 7·2 per 1000 of the population, estimated at 4,648,950 persons in the middle of the year. In the three preceding months the rates had been 6·0, 8·0, and 9·0 per 1000 respectively. The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Holborn, and the City of London, while they showed the largest excess in Hackney, Bethnal Green, Stepney, Poplar, Bermondsey, and Woolwich. The notified cases of small-pox, which had numbered four, four, and one in the three preceding months, rose again last month to six, of which three belonged to Deptford, two to St. Pancras, and one to Stepney. The Metropolitan Asylums hospitals contained three small-pox patients at the end of last month, against nine, three, and one at the end of the three preceding months. Scarlet fever was much less prevalent during last month than it had been in the preceding month; among the various metropolitan boroughs this disease showed the greatest proportional prevalence in Stoke Newington, Hackney, Poplar, Wandsworth, Camberwell, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1801, 2127, and 2662 at the end of the three preceding months, had declined again to 2566 at the end of last month; the weekly admissions averaged 254, against 214, 311, and 359 in the three preceding months. The prevalence of diphtheria showed a slight decline last month; this disease was proportionally most prevalent in Fulham, Hackney, Bethnal Green, Stepney, Poplar, and Woolwich. The Metropolitan Asylums hospitals contained 893 diphtheria patients at the end of last month, against 818, 871, and 940 at the end of the three preceding months; the weekly admissions averaged 123, against 119, 131, and 139 in the three preceding months. Enteric fever was rather less prevalent than in the preceding month; among the various metropolitan boroughs this disease showed the greatest proportional prevalence in Hackney, Holborn, Stepney, Poplar, and Bethnal Green. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 135, 237, and 225 in the three preceding months, had further fallen at the end of last month to 178; the weekly admissions averaged 25, against 29, 45, and 25 in the three preceding months.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1904.

(Specially compiled for THE LANCET.)

Cities and Boroughs.	Estimated population in the middle of 1904	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.													
		Small pox	Scarlet fever.	Diphtheria *	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever	Erysipelas	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria *	Whooping cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death rate per 1000 living	Deaths of infants under one year to 1000 births
LONDON...	4,648,950	6	1544	782	—	230	5	34	596	—	3197	7·2	—	89	54	79	45	—	37	—	101	411	0·9	7389	16·6	125
West Districts																										
Paddington	146,975	—	43	17	—	6	—	—	19	—	85	6·0	—	—	1	5	1	—	1	—	9	17	1·2	204	14·5	137
Kensington	179,236	—	16	25	—	3	—	2	17	—	63	3·7	—	—	1	2	1	—	1	—	3	8	0·5	275	16·0	143
Hammersmith	117,412	—	36	22	—	4	—	1	14	—	77	6·8	—	1	3	4	5	—	—	—	4	17	1·5	186	16·5	167
Fulham	152,482	—	34	41	—	2	—	—	18	—	95	6·5	—	1	1	—	6	—	—	—	8	16	1·1	222	15·2	112
Chelsea	74,329	—	21	4	—	1	—	1	4	—	31	4·3	—	—	1	1	—	—	1	—	1	4	0·6	117	16·4	231
City of Westminster	177,321	—	34	13	—	8	1	1	13	—	70	4·1	—	—	—	—	1	—	—	—	4	5	0·3	201	11·8	95
North Districts																										
St. Marylebone	130,337	—	24	16	—	4	—	—	24	—	68	5·4	—	—	—	1	—	—	—	—	3	4	0·3	207	16·6	108
Hampstead	86,663	—	21	6	—	1	—	1	2	—	31	3·7	—	—	—	—	1	—	—	—	1	2	0·2	80	9·6	126
St Pancras	235,936	2	47	34	—	13	—	2	27	—	125	5·5	—	5	2	7	4	—	1	—	2	21	0·9	449	19·8	146
Islington	341,044	—	124	51	—	20	—	4	41	—	240	7·3	—	6	1	5	3	—	5	—	6	26	0·8	548	16·8	132
Stoke Newington	52,445	—	23	7	—	1	—	—	7	—	38	7·6	—	2	—	1	—	—	—	—	1	4	0·8	73	14·5	66
Hackney	226,256	—	130	52	—	20	—	3	38	—	243	11·2	—	6	6	5	—	—	2	—	2	21	1·0	339	15·6	122
Central Districts																										
Holborn	57,161	—	7	2	—	8	—	1	6	—	24	4·4	—	—	—	—	—	—	—	—	5	5	0·9	121	22·1	185
Finsbury	98,958	—	34	16	—	7	—	1	11	—	69	7·3	—	8	3	3	—	—	4	—	1	19	2·0	201	21·2	105
City of London	23,482	—	—	3	—	1	—	—	4	—	8	3·6	—	—	—	—	1	—	—	—	—	1	0·4	27	12·0	79
East Districts																										
Shoreditch	117,033	—	33	14	—	6	—	—	19	—	72	6·4	—	5	—	—	1	—	1	—	3	10	0·9	252	22·5	198
Bethnal Green	130,207	—	56	43	—	10	2	2	30	—	143	11·5	—	4	4	6	5	—	1	—	2	22	1·8	272	21·8	155
Stepney	303,791	1	128	98	—	35	—	1	54	—	317	10·9	—	9	7	13	1	—	7	—	8	45	1·5	607	20·8	153
Poplar	109,905	—	69	81	—	15	—	2	29	—	196	12·0	—	2	4	10	2	—	3	—	10	31	1·9	201	18·5	120
South Districts																										
Southwark	207,937	—	43	23	—	12	—	1	41	—	120	6·0	—	1	4	1	1	—	4	—	4	15	0·8	391	19·6	150
Bermondsey	129,397	—	61	15	—	7	—	—	21	—	104	8·4	—	12	2	—	3	—	1	—	2	20	1·6	255	20·6	185
Lambeth	310,359	—	90	38	—	12	2	4	23	—	169	5·7	—	3	2	2	2	—	2	—	7	18	0·6	460	15·5	128
Battersea	175,465	—	45	24	—	10	—	—	18	—	97	5·8	—	—	1	3	—	—	—	—	3	7	0·4	222	13·2	104
Wandsworth	257,448	—	109	43	—	5	—	3	35	—	195	7·9	—	12	1	4	1	—	—	—	3	21	0·9	314	12·7	106
Camberwell	268,384	—	130	27	—	11	—	2	27	—	197	7·7	—	—	5	1	2	—	—	—	5	13	0·5	395	15·3	123
Deptford	113,509	3	32	16	—	4	—	1	22	—	78	7·2	—	1	1	—	1	—	1	—	3	7	0·6	177	16·3	135
Greenwich	101,651	—	37	3	—	—	—	—	14	—	54	5·5	—	—	—	1	1	—	1	—	2	5	0·5	158	16·2	125
Lewisham	140,401	—	56	19	—	2	—	1	10	—	88	6·5	—	7	1	2	1	—	—	—	3	14	1·0	167	12·4	115
Woolwich	123,416	—	61	29	—	1	—	—	8	—	99	8·4	—	4	3	2	1	—	1	—	2	13	1·1	168	14·2	147
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

Erysipelas was proportionally most prevalent in St. Marylebone, Hackney, Bethnal Green, Stepney, Poplar, Southwark, and Deptford. The 34 cases of puerperal fever notified during the month included four in Islington, four in Lambeth, three in Hackney, and three in Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending Dec. 3rd the deaths of 7389 persons belonging to London were registered, equal to an annual rate of 16·6 per 1000; in the three preceding months the rates had been 19·1, 14·0, and 14·3 per 1000. The lowest death-rates in London last month were 9·6 in Hampstead, 11·8 in the City of Westminster, 12·0 in the City of London, 12·4 in Lewisham, and 12·7 in Wandsworth; the highest rates were 20·6 in Bermondsey, 20·8 in Stepney, 21·2 in Finsbury, 21·8 in Bethnal Green, 22·1 in Holborn, and 22·5 in Shoredith. The 7389 deaths from all causes included 411 which were referred to the principal infectious diseases; of these, 89 resulted from measles, 54 from scarlet fever, 79 from diphtheria, 45 from whooping-cough, 37 from enteric fever, and 107 from diarrhœa. The lowest death-rates from these diseases last month were recorded in the City of Westminster, St. Marylebone, Hampstead, the City of London, and Battersea; and the highest rates in Hammersmith, Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey. The 89 fatal cases of measles showed a decline of 127 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Stoke Newington, Finsbury, Shoreditch, Bermondsey, Wandsworth, and Lewisham. The 54 deaths from scarlet fever were 13 below the average number in the corresponding periods of the ten preceding years; this disease showed the greatest proportional mortality in Hammersmith, Hackney, Finsbury, Bethnal Green, and Woolwich. The 79 fatal cases of diphtheria showed a decline of 135 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Hammersmith, St. Pancras, Finsbury, Bethnal Green, Stepney, and Poplar. The 45 deaths from whooping-cough were equal to only one-half of the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in Hammersmith, Fulham, St. Pancras, the City of London, Bethnal Green, and Bermondsey. The fatal cases of enteric fever numbered 37 last month, against a corrected average of 110; among the various metropolitan boroughs the highest death-rates from this disease were recorded in Islington, Finsbury, Stepney, Poplar, and Southwark. The 107 deaths from diarrhœa were slightly in excess of the corrected average number; this disease was proportionally most fatal in Paddington, Fulham, Holborn, Poplar, and Deptford. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was nearly 49 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 135 per 1000. The lowest rates of infant mortality were recorded in the City of Westminster, Stoke Newington, Finsbury, the City of London, Battersea, and Wandsworth; and the highest rates in Hammersmith, Chelsea, Holborn, Shoreditch, and Bermondsey.

Correspondence.

"Audi alteram partem."

THE PROPOSED GENERAL REGISTRATION OF MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—Although I have ceased to be a member of the General Medical Council I continue to be much interested in its proceedings and observe with regret the abortive issue of the recent discussion on the above subject, and I think few of your readers but will agree with Sir Victor Horsley who said that the "Council was stultifying itself," and I cannot magine any vote more likely to lower the Council in the estimation of the public than the one he refers to. The Council accepted a meaningless resolution as a means of escaping the expressing any opinion on a question of vital interest to the profession and to the public. I venture to think it worth while trying to elucidate the reasons why this resolution was adopted by so large a majority.

The question before the Council involved two distinct questions. First, the advisability of increasing the income of the Council by imposing a fee on the registration of medical students; and secondly, that of the compulsory registration of medical students. It is admitted that the income of the Council is insufficient for the due performance of its duties, and three methods have been suggested for augmenting it—viz., first, a tax of say £1 imposed on all registered practitioners. This would bring in a large revenue but it would be very difficult to collect, would be resisted by many members of the profession, and as it would necessarily involve the erasure of the name of all defaulters from the Register this would react very harshly and unfairly on not a few practitioners who certainly from various causes would fail to pay the tax punctually. It is supported, however, by some members of the Council, obviously because it would be a step towards having the Council largely composed of "Direct Representatives."

The second method proposed is by the raising the present registration fee of £5 to £10, resisted, I think, on the ground of its being a tax on the profession, which it certainly is not, for the fee is paid by the parent or guardian of the medical student on his admission to the Register of medical practitioners; the Stamp Duty and other fees paid by certain classes of law students might equally well be called a tax on their profession, but the curious feature is that many who approve of a real tax of, say, £1 per annum to be paid by all practitioners object to this increased registration fee, which is not such. Lastly, we have the proposal that a small fee be paid on the registration of students; £1 was the sum named; against this a great outcry is raised. Why is this so? Is it possible that anyone thinks in all sincerity that the registration of medical students is not desirable, and if desirable should it not be compulsory, and is it not fair that a fee should be paid to cover office and other expenses? Clearly it is not the small fee which has raised this outcry.

The opposition to the proposal is without doubt due to the dread of the registration of students being made "compulsatory" and the fear that then the General Medical Council may obtain powers to enforce a higher standard of preliminary education than is at present accepted by at least some of the universities and licensing bodies; in fact, the real question at issue during the recent debate was not how an additional income could best be raised but whether the Council should be intrusted with power to inspect the examination of intending medical students in the subjects of preliminary education so as to exclude from entrance into the profession those whose education is so defective as to render them unfit ever to become efficient medical practitioners. For myself, I have ever held that to raise the standard of professional education it is absolutely necessary first to raise the standard of preliminary education, but at present the Medical Council has not the power to do so efficiently. I cannot think that the University of Oxford would have any objection to the Medical Council inspecting the examinations held by it in the case of candidates for its medical degrees, but I do not think that such inspection should be required from students who take out the full course of studies and pass the examination required for the B.A. degree of that or any other university, but certainly those universities which grant the M.B. or M.D. degrees without requiring this should be inspected, and the fear of this accounts for the opposition of the representative of the Royal University of Ireland and very likely of other universities also.

But the most determined opposition to the compulsory registration of students comes from the Conjoint English Colleges, and as I am satisfied that they are far from opposing the raising the standard of preliminary education it is not difficult to see that the real grounds of their opposition to compulsory registration of students rests mainly, if not entirely, on the opposition of the Council to the study of chemistry and physics at other than medical schools or a few scientific institutions, an opposition which, in my opinion, is very unwise, and to this opposition I fear the failure to improve the standard of the preliminary education of

students will be mainly due I have even held that the study of these subjects should be encouraged during the last year of school life and I approve of the action of the English Colleges in recognising the teaching of these subjects in all such schools as have proper means of so doing, and I think the discussion on Dr Lindsay Steven's resolution supports this view, for if intending medical students studied the subjects to be passed in what in that resolution is termed the preliminary scientific examination' before becoming medical students much, if not all, of the evils on which he and his seconder enlarged would be removed There is no doubt but that the raising of the standard of preliminary education would for a time injuriously affect Ireland where the standard of such education is lower than in the sister islands Much as I regret that this should be the result, specially as regards the Irish Conjoint Colleges, it would ultimately be for their advantage There is much comment here relative to the low standard of success attained by candidates from these bodies in the examinations for commissions in the army and navy medical services and the question is being discussed How is the failure to be accounted for? To me it seems that the fault lies in the lower standard of preliminary education which exists in Ireland for the purely professional education is good, and this opinion is strengthened by the fact that the success attained by candidates from the University of Dublin, all of whom are required to take out the B A degree stands very high

I cannot but believe that the time will ere very long arrive when chemistry, physics, and also indeed biology will form part of the subjects to be passed in the examinations to be held previous to the registration of medical students and I feel equally confident that the compulsory registration of medical students will also be adopted, for it is impossible that the public good which demands the services of highly educated medical men alike for the poor and the rich will be sacrificed to the interest of a few universities or licensing bodies I am, Sirs yours faithfully

Dec 9th 1904 LOMBE ATTHILL M D Dub

METROPOLITAN HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET

SIRS—An effort is about to be made to increase the collections on behalf of the metropolitan hospitals and dispensaries on Hospital Sunday, June 25th 1905, and it would be a great stimulus to the various congregations in the metropolitan area if the collections at St Paul's Cathedral on Hospital Sunday could be increased from their present total of £5490 to £10 000 It is believed that the cooperation of the town travellers of the large City houses will be a very powerful factor in carrying this, or any other plan suggested by themselves, into effect for increasing the fund to £100 000 on next Hospital Sunday

The Lord Mayor, with this object in view, has convened a meeting at the Mansion House on Saturday, Dec 17th 1904, at 4 o clock I am, Sirs, yours faithfully,

EDMUND HAY CURRIE Secretary

Mansion House, E.C Dec 7th 1904

INSTRUCTION OF THE LAITY IN THE EARLY SIGNS OF CANCER

To the Editors of THE LANCET

SIRS,—Mr A W Mayo Robson, in concluding his Bradshaw Lecture on the Treatment of Cancer, says 'Is it too much to hope that some of the views I have enunciated may filter through the profession to the public and serve to convince them that until a true prophylactic for cancer is discovered they will be consulting their own interests best by seeking medical advice earlier, since to trifle with their ailments in the early stages is to lose the favourable moment and ultimately to hear the verdict, alas, too often pronounced, 'Too late'

The chances of the [illegible]
either through the pr[illegible]
present conditions *nil*
know as little of the [illegible]
it does to day Every recent work on cancer includes an appeal so frequently repeated as to be almost monotonous for earlier treatment by operation based on earlier diagnosis Earlier diagnosis can only follow earlier appeal by the patient to the medical man Earlier application to the medical man can only result from familiarity with the earliest signs of cancer, a knowledge in which the laity is at the present time sadly deficient The layman who sees cancer cases chiefly in their later and painful stages concludes, not unnaturally, that cancer is in all its stages a painful disease and that any disease or tumour which is not painful cannot be cancer So long as the public mind is possessed by this idea it is useless for the surgeon to hope to see the majority of cancer patients in a stage of the disease sufficiently early to be curable by a radical operation

The remedy is the direct education of the public by the profession, but this is far easier said than done One method is to induce medical men, employed as lecturers by educational authorities, ambulance, first aid, and similar societies to include in their lectures a statement and explanation of the signs of cancer in its earliest stages and to emphasise the fact that of cancer cases in which a radical operation is performed in the early stages at least 50 per cent are permanently cured Such teaching is really a form of first aid and would save more lives in a year than instruction in the differential diagnosis of fractures and dislocations or the various forms of unconsciousness would save in a century Another means of instructing the public is to teach the nurses connected with hospitals and nursing institutions the elementary facts concerning the early stages of cancer Nurses, while attending patients in private houses, are frequently appealed to by relatives and friends of the patients to say whether a "lump or 'swelling is of any importance, the possessor of the tumour frequently stating that the "swelling cannot be a cancer because it gives no pain

The laity, which is being instructed in the prevention and cure of consumption, must be educated in the equally important subject the prevention and cure of cancer Such teaching must point out that (1) cure of cancer is only possible by an operation performed while the growth is in an early stage, (2) the early stages of cancer are free from pain and (3) among the first signs of cancer are (*a*) the appearance of a small, painless swelling or (*b*) the occurrence of discharges not of necessity blood stained, from the genito urinary or rectal orifices unaccompanied by pain

Publication in the lay press of extracts from lectures delivered at medical meetings will never educate the laity It is futile for surgeons to go on hoping that the public will teach itself the above facts The public must be taught and it is the duty of medical men to act as teachers The above suggestions cover but a few of the methods by which this teaching may be carried out and it is only by employing every available means of instruction that the surgeon can hope to reduce the number of occasions on which he is compelled to pronounce the verdict "Too late

I am, Sirs, yours faithfully,

Plymouth Dec 4th 1904 C HAMILTON WHITEFORD

THE PAINS OF INFLUENZA

To the Editors of THE LANCET

SIRS—It is probable that pain results from the partial disintegration of structure occasioned by the accumulation of waste products In other words, it is the subjective expression of defective or perverted metabolism, and this in its turn may be set about by almost any disease A human being suffers from vague pains, which gradually become worse and then perhaps quite suddenly rise to an overwhelming intensity in one part—probably the structures in and around some joint There may be epigastric or umbilical pain and intense headache, but the chief stress probably falls upon some articulation, that of the left shoulder, for example, a knee, finger or toe the disturbance extending often to adjacent muscles and bones In the patient now taken for illustration there was no swelling in or near the joint but later there was some slight swelling of the hands, between the phalangeal joints and also a little of the arm The muscles of this left arm were tender and painful and incapable of voluntary use, but they contracted involuntarily The same side of the trunk and to a less extent, the whole of the body were affected in a similar manner The muscles the bones, the tendinous sheaths, and especially the joint structures were very painful The urine was loaded with urates, and other acute febrile symptoms

were shown. Luckily the disturbance was confined to one part mainly, and the heart, being strong, was able to bear the strain put upon it. The case appeared to be one of influenza and yet was one not unlikely to be designated acute rheumatism.

Pains, like those of rheumatism, occurring in patients suffering from influenza, might possibly be supposed to be due to the sufferers having been previously afflicted with the former malady. In certain cases this may be true; but, on the other hand, it is perhaps equally probable that some so-called rheumatic pains may really be caused by the virus of influenza. This latter disease in its rheumatic form may be unaccompanied by sore-throat or tonsillitis, but the tongue has a thick white or brownish fur. There may be no definite affection of either the digestive or the respiratory systems, though either or both may be also attacked. This kind of influenza, in which the chief symptoms are muscular and articular pains, may occur in persons who are almost invulnerable to ordinary colds or chills. The pains may render the sufferers completely prostrate. In typical rheumatic fever there is frequently much swelling of the tissues around the several joints affected. Many joints may be implicated both concurrently and consecutively, and the mischief is often transferred from some to other joints. In cases of influenza there is a more frequent and severe affection of muscles, and generally one group of articulations in contiguity or propinquity bears the brunt of the storm, the affection extending directly therefrom so as to involve by degrees, e.g., all or most of the joints of the shoulder, arm, and hand, even the phalangeal joints not escaping. Perhaps, however, the progress of the disease may be arrested at the original site or at any point.

Some influenza patients are affected with ulcerative tonsillitis (simulating diphtheria) or of tonsillitis without ulceration, quickly followed or not, as the case may proceed, by lung troubles perhaps; some with gastro-intestinal disturbance mainly (often closely resembling typhoid fever); and, finally, a few, apparently well-nigh invulnerable in the ordinary manner, or at any rate strong in both respiratory and alimentary systems, are, after perhaps resisting the disease for weeks or even months, the body fighting against the poison all the time but succumbing to its insidious onslaughts at last, attacked with the rheumatic form of the malady. It seems as if the poisonous products of tissue-changes in cases of perverted metabolism, being carried all over the system by the blood and lymph channels, succeed in damaging and partially destroying such parts as are most vulnerable, howsoever that liability to be damaged may have been brought about. Indeed, this general statement is perhaps applicable to all the phenomena of disease, even such special symptoms as rashes, &c., being also similarly determined. One may even suspect that the non-appearance of rashes may at times mask, e.g., such diseases as variola, and it is not impossible that such a case might even be mistaken and called acute rheumatism. Unfortunately, we are apt to be misled by our love of definite demarcations, and we may easily lay too much stress on subsidiary symptoms which may or may not be present.

When influenza is rife the subjects of it carry the virus wherever they go, and there is no possibility of entire escape from being in proximity with it now and again, and that is why it was said above that one may succumb at last after resisting the malady for weeks or months.

By this kind of influenza the patient may be rendered helpless, unable perhaps even to turn round in bed. The muscles of the affected part contract involuntarily and the fibrillar movements can be occasionally felt by the patient. The contractions are probably stimulated by some impurity in the blood supplied and in turn they augment that impurity by the making of waste products. They are beneficial, however, in so far as they tend to keep bones, joints, and organs at rest, though otherwise mischievous. The perspiration is profuse and though it gives off a vinegar-like smell, has also a sickly, pungent, unpleasant odour, reminding one of the smell of mice, or valerian, or variola, which is far more powerful than the acid smell. As to treatment, in my opinion morphine, colchicum, most salicylates, bromides, and iodides should be avoided as doing just as much harm as good. Aspirin, indeed, is the only salicylate preparation which can be tolerated by many, and it is beneficial in allaying pain and inducing sleep. The alkaline treatment—e.g., with bicarbonate of potassium—may safely be pushed until the urine is neutral, and should then be temporarily stopped until that fluid regains normal acidity. Guaiacum is useful in some cases and so are gelsemium and the ordinary anti-febrile agents which must not be forgotten. The best local remedial agent is heat, applied either in the form of hot water bottles wrapped in flannel or by hot bricks or other solid substances similarly covered. If a limb is placed in a warm limb-bath containing warm water or a weak solution of permanganate and bicarbonate of potassium great relief is experienced by the sufferer. It is sometimes useful to alternate the aspirin and the alkaline treatment. Each case must be studied separately, and by skilful and patient treatment, coupled with zealous nursing, a cure can generally be obtained, even though it be tardy. A point of importance is that I believe there are three classes of cases presenting allied symptoms—viz., (1) those one may call rheumatic, (2) those we refer to as gout, and (3) those we may designate as infectious, produced by germs, sometimes by those of influenza, sometimes of other maladies. I fear my wish to occupy your space with dilating further on this important topic must now be restrained, and thanking you in anticipation,

I am, Sirs, yours faithfully,

GEORGE GRESSWELL, M.A., L.R.C.P. Edin.

Great Grimsby, Dec. 10th, 1904.

MILK AND ITS DERIVATIVES AS FOOD.

To the Editors of THE LANCET.

SIRS,—Dr. Harry Campbell has recently published an exhaustive review of the Evolution of Man's Diet.[1] Were he to perform a like task 200,000 years hence he would possibly describe the diet-epoch of to-day by a neat equivalent of "early chemico-physiological." The epoch would be characterised by primitive methods of supplying the individual elements of food to the organism in a concentrated and diffusible form and by a corresponding involution of the digestive organs. No serious attempt would have yet been made to elaborate food direct from inorganic sources, that process remaining for some 50,000 years longer the exclusive province of the vegetable kingdom. The question which presents itself to the mind thus peering into future eons is whether it is better to aim at perfecting the human organism at its present stage of development, while ignoring the inevitable march of evolution, or whether to anticipate the latter and deliberately encourage the involution of those organs the essential utility of which is threatened by the onward march of the arts and sciences under the ægis of accumulating knowledge. The answer is that man neither heeds his origin nor his bourne: they are too remote; he neither regrets the massive inferior maxilla of simian ancestors nor does he betray impatience to acquire the edentulous oral cavity of remote descendants. He is content to assume that his present type is permanent and consequently need concern himself alone with the task of perfecting that type. It is ignorance, not design, that leads him to infringe the laws which govern the wellbeing of his actual state. He passes his life in an atmosphere of foul air because he ignores its harmfulness, not because he wishes gradually to acclimatise his race to such a medium; he feeds on concentrated food because he thinks it is good for his digestion, not because he designedly wishes to hasten the march of evolution.

Assuming, then, that the tacit aim of mankind is to maintain his present type, it behoves the physician not only to promote the development of the organic potentialities as a whole but to watch for indications of premature decay involving individual organs, to inquire into the causes, often insidious in their line of approach and paradoxical in their workings, which coöperate to initiate and perpetuate retrogressive processes and to point out the rational means of defence against the operation of such causes. This conception of the physician's province induces me to review the position of milk and its derivatives as human food considered in its bearing on the widespread prevalence of functional weakness and structural degeneration of the digestive organs.

In a large proportion of the community the modern civilised digestive tract is a pathological specimen from end to end. The buccal cavity exhibits a picture of ruin and decay in its dental armoury and glandular apparatus, the anal orifice is girt about with a ring of

[1] THE LANCET, Sept. 10th, 17th, and 24th, 1904, &c.

ples, while the intervening portion with its accessory organs affords a kaleidoscopic picture of pathological changes exhibiting a selective preference for certain localities Whence this morbid tendency to dry rot and premature decay? Among the many causes which may contribute towards the premature degeneration of the digestive organs, one is prompted to seek first in the direction of their special function to ascertain if the food habitually taken is calculated to call into play the functional activity of the digestive organs On the threshold of this inquiry one is met with a negative answer—a great proportion of our food is taken in a liquid, pulpy or soft form, consequently it fails to afford the stimulus necessary to maintain the teeth and buccal glands in a state of functional efficiency The false start anticipates a lame race and a poor finish to the digestive processes

Milk is the most widely distributed form of liquid food and affords a convenient example of the scope and limitations of liquid foods in general As a food it has the following advantages it is a complete and highly nitrogenous food, it can be taken easily and rapidly, moreover, being a natural food it is not as a rule distasteful to the individual But with each of these advantages are associated certain drawbacks, if we put aside milk drawn at the fountain head in the normal way Being a complete food milk may form an exclusive diet a purpose for which it is frequently employed, as in the systematic treatment of renal affections In a person thus nourished one frequently finds the tongue coated, the breath foul and a condition of habitual constipation The diet makes no demand on the functional activity of the muscles of mastication nor on the salivary, lingual, and mucous glands, moreover, apart from the absence of stimulus to secretion the mucous surfaces become lined with a thin film of milk which blocks their orifices and forms a nidus for the growth of saprophytes Hence a foul mouth, coated tongue, and acidity, betraying functional inactivity and initiating structural decay The liquid meal pours into the stomach unheralded by nervous reflex and unmingled with stimulating salivary secretion Consequently no preparation has been made for its reception its visit is unexpected, and its behaviour renders its presence unwelcome The liquid garb of innocence is discarded and discloses masses of solid curd, difficult of access to the gastric juices, causing an irritative flow of mucus and affording a soil favourable to the growth of a varied pathogenic flora The fermenting mass of curd struggles through the pyloric orifice, disturbs the hepatic function irritates the bowel evolves gases and refuses to move on without the aid of mercurial or saline purgation, in a word, it acts the part of the rabid and iconoclastic social reformer.

Such is often the effect of whole liquid milk taken as an exclusive food Now, however, it is rarely given without dilution or admixture with other ingredients which serve to break up the curd or otherwise prepare it for absorption But in whatever form taken liquid milk retains the essential disadvantages of liquid foods in general—viz that it passes direct to the stomach without making any demand on the complex mechanico physiological processes of mastication In contrast with milk in the liquid form its solid derivatives are eminently suitable for human food Cheese is highly nutritious and in conjunction with butter and wholesome bread [illegible] rishing meal Its repu[illegible]tation [illegible] he fact that instead of being [illegible] as a nothing the nitrogenous element of a meal in itself it is frequently introduced to the stomach at the end of an already complete meal with the consequence of an explosive gastric disturbance Butter is a most useful element of the dietary, it replaces the oil of southern nations and the blubber of the Esquimaux Essentially a heat producer, it should be taken in larger quantity in cold weather than in hot, its combination with farinaceous food serves to subdivide and render it more accessible to the biliary and pancreatic secretions

The following summary is based on the argument roughly traced in the above sketch and conveys my conception of the place cow's milk should occupy as human food 1 In infancy properly prepared and administered it is the best substitute for mother's milk 2 In health when recognised and used as a food and not as a drink it finds a useful place in the dietary both of children and of adults on the following conditions (*a*) that it be excluded from all meat meals, and (*b*) that it be either diluted or taken with some form of amylaceous food 3 In disease it is a readily administered complete food and may be used as such when well diluted or predigested Its disadvantages are that it fails to excite buccal secretion, readily undergoes fermentative changes, and tends to produce constipation It should therefore be given for short periods only and be replaced by solid food as soon as possible It will probably [illegible] ie dietaries of disease 4 The solid derivatives, cream—are essentially useful constituents of the dietary and afford, with bread potatoes and other amylaceous products a complete food which might well take a more important place in the nutrition of the Anglo Saxon race than it occupies at the present moment —I am, Sirs, yours faithfully,

Montreux STUART IDEY, M D Lond

THE RESULTS OF COLECTOMY IN CARCINOMA OF THE COLON

To the Editors of THE LANCET

SIRS —In answer to Mr Bilton Pollard's letter I am very sorry that during the transcription of my notes into type an error has crept into my published lecture, which, however did not occur during its delivery when I remarked that Mr Bilton Pollard and Mr Charles A Morton had each performed seven colectomies for cancer without a death

In the typewritten copy sent to your journal the subsequent histories of Mr Morton's cases have been placed immediately after Mr Pollard's name instead of in their proper place a few lines below after Mr Morton's name It should read Mr Bilton Pollard published in the *British Medical Journal* of Jan 23rd, 1904, reports of seven colectomies without a death and in none of the cases had there been recurrence of the disease One patient lived for four years and died from heart disease and the others were living at periods of four years two and a half years two years and two months nine months, six months and two months respectively after operation

It adds additional interest to this important series of cases to know that these patients are still free from recurrence and it fully bears out my statement that cases in which the disease is limited ought to be capable of cure by enterectomy if operated on early —I am, Sirs, yours faithfully,

Park crescent W Dec 12th 1904 A W MAYO ROBSON

THE DECLINE IN THE CONSUMPTION OF LIGHT WINES

To the Editors of THE LANCET

SIRS Having read the article in THE LANCET of Oct 8th [illegible] Consumption of [illegible] rs of the Union [illegible] of the interest [illegible] you have been good enough to show in the subject of claret drinking We have long felt that the disfavour into which our wines have fallen has been largely owing to a misapprehension as to their effects on the system from a hygienic point of view—a misapprehension which we cannot help feeling has been increased rather than allayed by a certain number of the medical profession It is therefore a cause of [illegible] ers here that a journal of [illegible] lent the weight of its in [illegible] rmer position, to refute the [illegible] opinion that it is not a wholesome or desirable beverage for daily use and to impress on the general consumer the fact which is absolutely correct that there never was a time when better value could be obtained in claret than now [illegible] n bringing out the [illegible] by the majority of [illegible] t an art in wine- [illegible] which has of late [illegible] years disappeared to a great extent Claret even in the cheaper grades requires a certain amount of trouble and care if it is to be properly appreciated and it is just this ignorance in handling it which is so much to be deplored and which results in so many persons banishing it from their table declaring that the wine does not suit them, &c

In conclusion, and while tendering you our sincere thanks

1 Union Syndicale des Négociants en Vins de Bordeaux.

for the intelligent way (if we may use the expression) in which you have brought this matter forward, we should like to record our opinion that, quite apart from trade prejudice, you have rendered an important service to the public by your article. At the same time, the respectable members of the English wine trade owe you a debt of gratitude, for it is an undoubted fact that their interests lie wholly on the side of an increased consumption of light wines as against the prevailing fashionable beverage of "whisky-and-soda."

With apologies for troubling you and with renewed thanks for having lent some of your valuable space to this subject,

We have the honour to remain, Sirs, yours faithfully,

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Bordeaux, Nov. 23rd, 1904.

HORSED AMBULANCES.

To the Editors of THE LANCET.

SIRS,—On behalf of the Metropolitan Street Ambulance Association may I be permitted to endorse the remarks made by Mr. John Troutbeck, the coroner for the south-western district of the county of London, on the urgent need of an efficient ambulance service for street casualties in London? Deaths such as Mr. Troutbeck alluded to are of far too frequent occurrence in the metropolis. Every year not only do people die who might be saved by the prompt arrival of a well-equipped ambulance with its skilled attendant, but some who would not otherwise die lose their lives entirely through the faulty method of their removal in unsuitable conveyances. During the last 25 years great efforts have been made to call attention to this deplorable state of things. His Majesty King Edward VII. when Prince of Wales did a great deal to forward the movement. The president of this association, Mr. Reginald Harrison, who was the initiator of the excellent Liverpool service, has repeatedly since 1881 pointed out what is necessary for London.

In the October, 1896, number of the *Nineteenth Century* appeared a very able article on horse ambulances by the Hon. F. Dudley Leigh who afterwards offered to present a perfectly equipped horse or motor ambulance to any suitable London public body that would accept it as an object lesson of what was done elsewhere. Although met with indifference in regard to his offer he succeeded in interesting some of the members of the London County Council in the subject, foremost of whom was Sir William Collins, who became chairman of the ambulance subcommittee soon afterwards appointed. Unfortunately the report issued by this body in 1902 obtained only half-hearted support from the other members of the late London County Council, so that no practical result followed.

In January of this year the medical profession took the matter in hand and formed themselves into the Metropolitan Street Ambulance Association with a membership which now numbers nearly 1100 of the most eminent medical men in London. This association endeavours to interest the public generally in this subject which so closely concerns every individual in the community. It wishes to see established in London with as little delay as possible an up-to-date ambulance service summonable by telephone and provided with rapid transport, so that skilled aid can be quickly brought to any case of accident or sudden illness occurring in the streets or public places and the patient removed to home or hospital in a comfortable ambulance with a watchful attendant at his side. In this the association has the support of the St. John Ambulance Association, of Mr. H. L. Bischoffsheim, and of practically everyone interested in the welfare of the 15,000 severe casualties occurring in London each year. The vastness of London and the fact that accidents do not recognise municipal boundaries, necessitate the provision of such a service by a public body with the scope of the London County Council which fortunately has ready at hand most of the machinery required in its fire brigade organisation. The combination of these two emergency services would add to the efficiency of each and could be worked conjointly far more economically than separately, as has been already proved in many towns where this arrangement exists. With so many splendid examples of what is done elsewhere at home and abroad, that London is still without an adequate ambulance service for humanely helping those in our streets who through sudden illness or accident are unable to help themselves, is a grave reproach to every public-spirited individual in the metropolis.

I am, Sirs, yours faithfully,

ARTHUR JAMES,

Honorary Secretary, Metropolitan Street Ambulance Association.
Gloucester-terrace, Hyde-park, W.

THE ETIOLOGY OF MALARIA.

To the Editors of THE LANCET.

SIRS,—On reading in THE LANCET of Nov. 19th, p. 1452, your correspondent's account of Professor Baccelli's remarks upon "the modern doctrines regarding the etiology of malaria" at the Fourteenth Annual Congress of Internal Medicine my feeling was one of astonishment at his attitude in regard to a subject the essential details of which are now beyond dispute. Such scepticism at this date on the part of an Italian is, to say the least, disconcerting. Why should not the well-known discoveries of Ross and of Professor Baccelli's own Italian school "destroy at a stroke the conception of malaria which has been handed down to us for generations and which was founded on observations of physicians of the highest attainments who dedicated their lifetime to the study of the subject." What did the said "physicians of the highest attainments" know of parasitology previously to about 1880, the date of Laveran's discovery. Does Professor Baccelli really mean to doubt the existence of the malarial parasite or that it is the cause of the disease? Professor Baccelli contends that the "mosquito theory" fails to throw light upon certain severe outbreaks connected with ricefields and marshes situated at long distances from the haunts of *anopheles*. I maintain that he cannot specify a single such outbreak recorded by any person competent to investigate the subject. It has, no doubt, often happened that collections of persons working in ricefields or marshes situated long distances from the haunts of *anopheles* have been subject to outbreaks of malaria if a week or so previously they have been in the region of infected *anopheles*. Why, Professor Baccelli is reported to ask, should it be a rule of prophylaxis to keep indoors after sunset in spite of the fact that *anopheles* lives by preference in side dwelling houses? In regard to this we have yet to learn that this is a rule of prophylaxis. It certainly was a popular notion at one time. Then he asks, how account for cases of malaria on board ship? Anyone who has travelled by the river steamboats in the African tropics knows how frequently the cabins are infested with *anopheles*, and others besides myself have found infected ones amongst them. May not the

passengers on those boats soon afterwards be at sea? I have travelled from Karachi to Trieste with both *anopheles* and *culex* in the saloon, the latter troublesome at meal times during the whole voyage How account, he says, for the diminution of malaria in towns after the water-supply has been improved? What pages have been written on this subject Professor Baccelli is very much mistaken in thinking that it is always improved in these circumstances In India it is usually just the reverse, as most Indian medical officers can testify. Why? Because in place of a few wells there are erected a multitude of standpipes, each of which is through carelessness left running frequently all night, with the result that a nice little marsh and patch of green grass are formed where *anopheles* can breed in peace and plenty Or, again, for the fact that malaria can be contracted in deserts? Every desert has its water holes and I have frequently seen these crowded with *anopheles* larvæ although the water was so loaded with salts as to be almost undrinkable Every traveller has to pass that way on account of the water, and near by, it may be, there is a shed or caravanserai where *anopheles* can be found in scores Amongst the travellers may be one or more with gametes in their blood from attacks contracted elsewhere In fact, all the conditions necessary for a virulent focus of malaria may be present in a desert

Professor Baccelli cannot mention an instance of explorers or others having suffered from malaria in uninhabited places unless they had previously suffered from the disease or had been a week or so previously in the haunts of *anopheles* It is possible that malaria may be transmitted from monkeys to man by the agency of mosquitoes, but as yet there is no positive evidence on the subject What Professor Baccelli means by "spontaneous" malaria I cannot guess He says that if *anopheles* are the only carriers of malaria how comes it that but a small percentage become infected by sucking malarial blood and become capable in their turn of infecting healthy persons? No one asserts that the mosquito is the only carrier of malaria but, on the other hand, no one has brought forward the least evidence as yet to show that the disease can be transmitted by any other agency Professor Baccelli is apparently unaware that only certain species of *anopheles* are capable of transmitting malaria *Anopheles Rossii*, for example, one of the commonest mosquitoes in India, apparently does not convey it Infection results in 100 per cent. of cases where malarial blood has been injected by means of a needle into healthy persons, says Professor Baccelli. He seems to forget that only one phase of the parasite, the gamete, which appears in the blood only towards the close of the attack or after it, is capable of undergoing development in the mosquito and producing an attack when the insect injects it into the blood of another person If the blood itself is inoculated direct any of the phases of the life cycle of development which goes on in man may produce an attack, and of course much sooner than when the gametes are transmitted *via* the mosquito The remarks attributed to Professor Baccelli with reference to certain epidemiological facts of importance in connexion with the marshes of Fucecchio that weigh against the "mosquito theory" are ambiguous, and with all respect to him I maintain that his statements are not substantiated The distribution of *anopheles*, he states, is not parallel to that of malaria either geographically or in time Where malaria is found there also are malaria bearing species of *anopheles* With regard to the relation of seasonal incidence of *anopheles* with that of malaria, no two places are alike, and no rule can be laid down It, moreover, is often quite impossible to distinguish recurrent from first or fresh attacks

Other difficulties in the way of the "mosquito theory" in the professor's view are the length of the period required for the development of the attack after the mosquito bite (about ten days) as compared with the shortness of the interval (often only three or four days) required for the newcomer in a malarial district to contract malaria Professor Baccelli admits then, after all, that mosquitoes do carry malaria, but his statement that the newcomer requires less than half as long to develop an attack after being bitten as the old-stager needs, I think, confirmation How explain he asks, the sudden outbreak of numerous cases, almost all primary, immediately after a downpour of rain? If this ever occurred how does Professor B[illegible] [illegible] may undergo its development in the *anopheles* alone or that Ross ever went beyond the bare suggestion that by means of the black spores it is capable of continuing to exist in the outside world independently of living organisms, his subsequent experiments amply proved that this was not so.

Finally, Professor Baccelli states that Ross speaks of having seen cases of malaria arise in persons who had drunk water containing mosquitoes and their larvæ All I can say is I have seen attacks of malaria arise in persons who had drunk too freely of water not containing mosquitoes or their larvæ I have ventured to offer the foregoing criticisms in the hope that they may to some extent counteract the effects that a communication so obviously out of harmony with present-day knowledge may have upon those not yet thoroughly conversant with this intricate and interesting subject, the main points of which have been fully investigated and discussed *ad nauseam* I am, Sirs, yours faithfully,

Liverpool, Dec 3rd, 1904 C CHRISTY.

THE EVOLUTION OF MAN'S DIET.

To the Editors of THE LANCET.

SIRS,—It is indeed refreshing to see at last a thorough investigation of the evolution of diet It seems incredible that the subject should hitherto have been almost entirely ignored, especially as it would appear to throw so much light on the difficult problems of dietetics As we recognise the importance of Dr H Campbell's investigation it is all the more necessary to subject it to criticism in the hope of either correcting any inaccuracies or of having one's own beliefs or interpretations of his views rectified Thus, then, while expressing a hearty sympathy with the trend of Dr Campbell's investigation, I venture to refer to one or two inferences which we may not be inclined to accept without further elucidation

Dr Campbell seems to be of the opinion that man "has lost the power of digesting in the unprepared state all but the very choicest varieties of wild vegetable food" It would also appear that he considers man has to a large extent lost the power of digesting cellulose, while at the same time he assumes the probable existence among anthropoid apes of "special powers" of coping with cellulose Now I fail to see how this loss of power could possibly have come about or sufficient evidence that it has been lost In the first place if it be said that the loss of the power of digesting cellulose might be assumed to have resulted from natural selection having caused a survival of a larger number of those who did not possess the power of digesting cellulose, we reply that this seems rather incredible, as even at the present time the possession of the power is a positive advantage and much more would this be the case in primitive times when food was less refined and prepared than it is at present Or, again, if it be maintained that the power had been lost, as natural selection being in abeyance the power to digest cellulose deteriorated, we reply that this can hardly be assumed, as the power to digest or to manipulate cellulose is one of the earliest established and therefore ineradicable characters, and, moreover, as I have indicated above, the power to digest cellulose must always have been of positive advantage to its possessors Lastly, it might be urged that the power had been lost by disuse and the inheritance of this acquired negative character but this possibility is excluded as we admit with Dr. Campbell that acquired characters are not inherited But is the idea that man has a less ability to cope with cellulose not a mistake? I am inclined to believe that man has it in his power to become able to digest or to cope with cellulose to all intents and

If we consider

chemically in

have to consider

Thus all that is

required is a more muscular intestine and especially a more efficient masticatory apparatus Dr Campbell mentions as having been insisted on by Dr A Keith that the only essential difference between the digestive apparatus of man and anthropoids is a difference in muscularity and also agrees with me "that we have it in our power to rear a race having teeth every bit as good as our primitive ancestors.' If, then, the teeth could be restored to their primitive efficacy equally, I believe, could the muscularity of the jaws and of the stomach and intestines It is difficult to realise how absolutely what we may call the training of the jaws and stomach is perverted in present day man The anatomical, the physiological, and the instinctive peculiarities of children suggest that at a very early age—say, at

the eruption of the incisor teeth—the child of our primitive ancestors was adapted to pierce, to gnaw, and to suck the fruits and shoots with which it was supplied and as some few shreds of cellulose were sure to be swallowed then indeed the transmission of cellulose was a function early imposed upon the intestines, while the enormous amount of gnawing and sucking which must have been necessary for the primitive child to extract a sufficiency of nutriment to supplement the decreasing supply of milk amply accounts for an enormous development of the jaw muscles. When we contrast this with the modern pap diet from which every particle of cellulose which demands mastication has been most carefully eliminated we observe that the change in the character of the food begins with weaning and is, I believe, amply sufficient to account for the marked difference in the muscularity of the masticatory apparatus and stomach.

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 12th, 1904. J. SIM WALLACE.

CANCER OF THE CERVIX COMPLICATING LABOUR.

To the Editors of THE LANCET.

SIRS,—I would not have ventured to write again on this subject were it not necessary for me frankly to apologise and to express my regret to Dr. Herbert R. Spencer for my careless statement that at the recent discussion at the Obstetrical Society he did not bring forward a case of his own to support his view that the Porro operation was safer than conservative Cæsarean section in inoperable cases of cancer of the cervix complicating labour. Dr. Spencer did relate such a case, with a successful result, and I much regret that I confused it with another case where, owing to labour being obstructed by cervical cicatrices, he had performed a Porro-Cæsarean operation two years after amputation of a cancerous cervix. This fact strengthens his argument and to that extent weakens mine. Dr. Spencer and I have gone carefully over Porro's report and have extracted from it all the Porro-Cæsarean operations with extra-peritoneal treatment of the stump, and we find that there were in all 35 cases, with 12 deaths—34·3 per cent. No statistics of conservative Cæsarean sections are given.

As regards Sarwey's statistics—viz., 33 cases of conservative Cæsarean section, with a mortality of 60 per cent., and 24 cases of Porro-Cæsarean operations with a mortality of 54 per cent., Dr. Spencer says that the latter group of cases includes some hysterectomies with intraperitoneal treatment of the stump. I quote Sarwey's exact words: "Fälle von Porro's Kaiserschnitt (Werth, Leopold, Fehling, Zweifel, Kehrer), bei inoperablem Carcinom ohne weitere operative Eingriffe niedergelegt." As Sarwey gives neither details nor references it is not possible to be sure whether he speaks of Porro-Cæsarean operations in the original meaning with the stump treated extraperitoneally, as I assumed, or whether he is adopting the looser meaning of "Porro" as now used in "foreign statistics"—e.g., Porro Report, 1901—which includes not only intra- and extra-peritoneal hysterectomies but even panhysterectomies. Dr. Spencer has drawn my attention to the fact that Zweifel has published two cases of Cæsarean hysterectomy with intraperitoneal treatment of the stump, with fatal results, as one would expect in such cases as these. If these are included among Sarwey's cases the statistics cease to be of any comparative value for our present purpose.

Further experience will prove which operation is the safer and this correspondence is merely an attempt to clear up some of the doubtful points bearing on the subject. At present the statistics of published cases are distinctly in favour of Dr. Spencer's view, but the numbers are very small. I am, Sirs, yours faithfully,

AMAND ROUTH, M.D. Lond.

Manchester-square, W., Dec. 13th, 1904.

ANOMALIES IN THE APPLICATION OF THE DUTCH PUBLIC HEALTH ACTS.

To the Editors of THE LANCET.

SIRS,—I was struck by an annotation under the above heading in THE LANCET of Dec. 3rd, p. 1585, and I beg to offer some short remarks about it. You say that the chief inspectors are not bound to pay attention to what the chairmen of the municipal boards of health say and often enough take no notice of their remarks. The natural consequence would be a great amount of dissatisfaction. Now I am one of these chief inspectors. There is not one in each of the provinces, as you state, but we are only four in the whole country and as such members of the Central Board of Health that sits in Utrecht. In this quality we hold a regular intercourse and meet very often. For my part of the business I never was aware of any amount of dissatisfaction in the way you mentioned and if such was felt in other parts of the country I ought to have heard it, but I never did. In fact, there is no serious dissatisfaction at all. Every organisation will have its defects and leave something to be wished for, and so does ours. But considering this organisation is new and the time of its working too short to be sure of its effects, it can fairly be said that the Public Health Act works well and will do so still more in the future. All the complaints in your annotation issue from the same source and there cannot be a serious reason to think that this bad meaning represents the prevailing opinion. Such trifling conflicts as are referred to in your annotation will happen always and everywhere and can only be considered as the results of a momentary misunderstanding. Complaints to this effect are merely superficial and personal and never reach to the very root of the question. The only one that touches the principles of the organisation is that concerning the chief inspector's preventing the boards from holding meetings to combat tuberculosis. This complaint was unjust, however. In dealing with the matter as he did my colleague was right, I believe. The municipal boards of health are part of the organisation and if they wish to act as such, not as private persons, they are bound to subject themselves to the regulations of the law. If they were allowed to disregard the supervision of the chief inspector and to assemble in a body of their own independent of that official the Act would be idle and the whole organisation would be endangered.

I would trespass too much on your space and also take too much of my own time if I dwelt longer on the subject, as I should willingly do, but I hope these few remarks will suffice to convince you that there is another manner of looking at the matter, and especially that there is no official apathy on our part or improperly clinging to "red tape." The British Empire has a high and well-deserved reputation for the management of public health and I should be very sorry if British readers could think that our country was acting so much in the wrong way as the annotation in your esteemed journal suggested. To prevent this I ventured to write to you. I am, Sirs, yours faithfully,

Dr. M. W. PYNAPPEL,
Chief Inspector of Public Health for the Northern Provinces.

Zwolle, Netherlands, Dec. 6th, 1904.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers to know that at its meeting on Dec. 9th the council of the London and Counties Medical Protection Society decided to impose an entrance fee of 10*s.* upon all candidates elected members of the society on or after Jan. 1st, 1905, and until further notice. The annual subscription (10*s.*) remains unaltered. The council decided to take this step chiefly for these reasons. On Jan. 1st, 1904, the number of members (including dentists) on the books of the society was 2682. Since Jan. 1st, 1904, the new members elected (including dentists) number 579. The society's reserve fund is now in this position:—

	£	s.	d.
Present investments	1796	15	4
Awaiting investment	600	0	0
Cash	1	7	0
	£2393	2	4

No similar society in England could afford to spend on each of its members as much money as could be so spent by the London and Counties Medical Protection Society.

For these reasons the council thinks that to require newly elected members to pay a small entrance fee is merely an act of bare justice to the members of the society who for years have exercised self-denial in order that the funds of the society might be placed on a fairly sound basis. The trustees of the society's reserve fund are Sir William H.

Broadbent, Bart, and Mr John Tweedy, President of the Royal College of Surgeons of England

I am, Sirs, yours faithfully,

G A. HIRON,

Honorary treasurer and chairman of council of the London and Counties Medical Protection Society.

Harley street, W, Dec 10th 1904

BOURNEMOUTH AS A HEALTH RESORT

To the Editors of THE LANCET

SIRS,—The dreary dulness of London enveloped in chill fogs has driven many invalids to seek medical advice as to where they could without undue expense or fatigue find some desirable health resort in a sheltered situation and not a few have been recommended to go to Bournemouth The medical practitioner if asked why he named Bournemouth would probably reply that the climate was remarkable for the equability of its temperature, that the subsoil carried away the moderate rainfall with great facility, rendering the place exceptionally dry, that the air was balmy and health giving, and that the town was surrounded by pine-forests But this is such an inquiring age that the medical man of the present time must be prepared if necessary to give reasons for the faith that is in him Your correspondent therefore from his snug quarters in one of the many comfortable hotels at Bournemouth forwards a few points he has noted during his stay in the place which will interest the family physician pressed unduly by the inquisitorial proclivities of the up to date patient

The first fact deserving of remark is the care taken by the authorities concerned in the health of this resort Under the watchful guidance of the medical officer of health every measure needful to secure the well being of the community is carried out and the advice bestowed on the public is as refreshing as it is practical, for instance, upon a school being closed on account of a case of a very mild form of scarlet fever many people went gossiping about saying that such closure must mean a serious outbreak of infectious disease But these scaremongers were soon brought to book and the official rebuke ran as follows "An erroneous impression such as this based on incomplete knowledge of the facts tends to propagate a scare which alarms the unknowing The milkmen in Bournemouth can find in its public records that milk may be "an opaque fluid which disguises a multitude of impurities" but they will also meet with the following significant passage "Until recently those impurities have received very little attention" There is much virtue in the words "until recently," for they convey to the initiated the satisfactory intelligence that the milk of Bournemouth is above suspicion The authorities are fully alive to the fact that some of the milk is coloured with annatto to suit the taste of a few who will have "rich looking" milk and they can only regret that provided the colouring matter is innocuous the law cannot interfere The visitor can safely depend on a prescription being made up properly in Bournemouth, for on a test prescription being presented at seven shops the drugs used were found on examination to be of "a highly satisfactory degree of purity" The bakers of Bournemouth are recorded to have taken prompt action on receiving a copy of the new Act of Parliament demanding structural alterations necessitating considerable expense and inconvenience It is rare to find it officially stated that anyone has "taken prompt action" in such circumstances, but the clean lime washed bake houses of Bournemouth bear testimony to the efficient and public spirited action of the bakers in complying with the somewhat drastic requirements of Parliament Nothing escapes the official eye at Bournemouth and the defect in the building by laws which allows houses to be built without ashbin accommodation will receive attention in due course and as your correspondent finishes these remarks the county borough sanitary inspector can be observed thoughtfully regarding the extensive improvements carried out on the premises of one of the few ice cream makers in Bournemouth, his officers also inspect any place where ice cream is made in the borough, however small the quantity

I am, Sirs, yours faithfully,

Dec. 12th 1904 AN OCCASIONAL CORRESPONDENT

A MEDICAL DEGREE FOR A MAYOR.—The University of Strasburg has conferred the honorary degree of M D on Herr Back, the mayor, in recognition of his valuable services in promoting the improvement of the sanitation of the city

SANITATION AT ST. LOUIS, MISSOURI.

(FROM OUR SPECIAL SANITARY COMMISSIONER)

UNHAPPILY for America the administration of the government of towns has been converted into a matter of business To be elected as member of a municipality is not looked upon as an honour but as a money making speculation It is an opportunity of conferring concessions and privileges and of receiving handsome gifts or commissions in exchange For this process the Americans have coined the word "graft" and when a post is offered the candidate generally inquires whether there is much 'graft in it' Such scandals have occurred in England, in France, and probably in all other countries, but they are exceptional, carefully concealed, and severely punished when they are discovered In America they are widespread, notorious and rarely punished But even for America the city of St Louis holds a prominent position, first for the enormity of its "graft" grievance and, secondly, for the altogether unprecedented prosecutions and punishments that have ensued Some time ago one of the two parties which disputed in public for municipal honours but in private came to terms over the plunder thought that they would improve their prospects and somewhat tarnished reputation by placing on their list of candidates the name at least of one person of undoubted honour and ability For this purpose they asked Mr Joseph W Folk whether he would allow his name to be brought forward as a candidate for the post of attorney of the city Mr Folk consented but at the same time declared that if elected he would act according to his conscience The corrupt ring thought that this pronouncement did not mean anything but was only a little of the usual electoral talk To their great consternation events proved that Mr Folk was in earnest When once he had collected the necessary evidence he proceeded to prosecute indiscriminately the members of his own party as well as those of the opposition They were accused of betraying the public trust and of various forms of bribery and corruption Some of the municipal councillors sought safety in flight, while others were caught and are now languishing in jail

In these circumstances when I called at the city offices to obtain information concerning the sanitary administration of St Louis I found matters in a state of confusion Many of my questions could not be answered, the excuse given being 'the recent municipal trouble' Thus it is that the last printed annual report of the health commissioner is for the year 1902 and it has not been possible to issue any further report since that time This is all the more regrettable as the report for 1902 is very complete, elaborate, and interesting The mortality was then set down at only 17 72 per 1000 and out of a total of 10,601 deaths 1399 were due to the principal zymotic diseases Of these latter typhoid fever was the cause of 198 deaths and the report further says We can estimate the actual number of cases of typhoid for the last year at from 3500 to 4000, a figure augurring very badly for our water supply The cases actually reported did not amount to 2000 but it is believed that much laxity prevails and only a portion of the cases are notified to the municipal authorities Statistics are published going back to the year 1867 from which it would [illegible] typhoid fever has been endemic in St Louis [illegible] been 5681 deaths from the [illegible] it has increased from 220 000 [illegible] 34 years has been 167 deaths to 590 000 [illegible] per annum but we find 294 deaths recorded in 1868 when the population was only 230 000 and 202 and 269 deaths in the two following years Then in 1892 when the population was estimated at 500 000 there were 441 deaths from typhoid fever In the following year there were 215 and since that time the figure has always been below 200 This, however, is much too high and the water supply is blamed as the principal cause Also legal proceedings have been taken by the city of St Louis and the State of Missouri against the State of Illinois and the sanitary district of Chicago to obtain an injunction against the Chicago Drainage Canal But the figures just given show that typhoid fever made

greater ravages at St. Louis when the town of Chicago still emptied all its drainage into Lake Michigan. The city of St. Louis derives its water-supply from the Mississippi below the junction of the Missouri with that great river. On the Mississippi, some ten miles above the St. Louis water intake, there is the town of Alton with 15,000 inhabitants, and about 15 miles also above the intake and on the banks of the Missouri there is the town of St. Charles with some 10,000 inhabitants. Higher up both rivers there are further sources of contamination and there is also the river Illinois which brings to the Mississippi the drainage of Hardin, Kampeville, and many other towns. It is into a tributary of the Illinois river that the drainage of Chicago is now being emptied so that Lake Michigan shall no longer be contaminated. The question, of course, rests on the amount of water the Mississippi contains and whether it suffices to purify all the filth poured into the river. It seems quite certain that the natural process of purification so far as the contamination caused by the nearer towns is concerned could not be accomplished before the St. Louis water intake is reached. The St. Louis health authorities themselves have denounced their own water-supply and have recommended that it should be boiled before it is used for drinking purposes.

Now, however, it is said that a notable improvement was effected in time to save the visitors to the World's Fair from the great danger to which they would otherwise have been exposed. There are large tanks or reservoirs where the muddy water of the Mississippi is kept so that the heavy particles held in suspension may settle to the bottom. To further insure the process of precipitation iron and lime are added. This results, it is stated, not only in the clarification of the water but in the removal of 90 per cent. of the bacteria which it contains. If this is still insufficient it is nevertheless a great improvement. But even if the water-supply was all that could be desired it is probable that there would still be many cases of typhoid fever and other zymotic diseases in the city. It is a very ramshackle place. Even in the most important streets and in the centre of the town there are numerous miserable tumble-down hovels. Many houses are undoubtedly of the slum type and can be recognised by their narrow, dirty stairs that are seen from the street. There are many very wretched overcrowded houses where the negroes die like flies. Indeed, the coloured population is a source of much anxiety and difficulty. The more intelligent coloured people go east. Thus, while the last general death-rate given is put down at 17·72 per 1000 it is calculated that it amounted to only 16·83 among the white population, but was equal to 30·86 per 1000 among the coloured population. A terrible amount of poverty and ignorance prevails among the coloured population. They gravitate to all the unhealthy districts and the low-lying ground where formerly swamps existed.

Perhaps the best phase of the sanitation of St. Louis is the energy and promptitude with which cases of infectious disease are removed and the premises disinfected. At the time of and after the removal of a small-pox patient all who have had any connexion with him are vaccinated and closely watched for two weeks. When the first week has elapsed their temperature is taken every day; thus, if the disease has spread the new cases are in hand at the very first symptom. Then a printed notice is placed outside any house where there is infectious disease, warning the public to keep away. The removal without permission of such a notice is qualified as a misdemeanour and is punished by a fine of from £1 to £5. In dealing with diphtheria a serious mishap occurred. Several children died from tetanus, the toxin of this disease having found its way into the diphtheria antitoxin. The horse bled on Sept. 29th to produce serum was killed on Oct. 2nd because it was found to be suffering from tetanus. Nevertheless, the serum taken on Sept. 29th was not destroyed. Owing to this "inexcusable negligence" the poisonous serum was given to the medical practitioners of the town from Oct. 10th to 23rd and four children died from tetanus after they had been inoculated with what was supposed to be antidiphtheria toxin. This fatal occurrence and the "graft" scandals have not enhanced the reputation of the city. Then came the numerous stories told of the extortions practised on those who went to the World's Fair; so that in all these circumstances it is not surprising if the number of visitors has fallen short of the anticipations and hopes originally entertained.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Small pox in Madras.—The Pilgrimage to Mecca.—Fresh Plague Measures for Bengal.

THE return of deaths from small-pox in the city of Madras during the last 30 years furnishes strong testimony to the efficacy of vaccination. Before 1884 the annual deaths amounted to hundreds and even thousands, but from June 1st, 1884, when the compulsory order came into force, the diminution each year has been extraordinary. In only three years has the number exceeded 100 and during several years less than ten deaths were recorded.

Few people know the fatherly care which the Government of India exercises for the comfort and safety of the pilgrims to Mecca. These people come from all parts of India—men, women, and children—with much baggage and for the most part in a very dirty condition. The Government obtains tenders for the passage, 16 feet of room are allowed for each passenger, and the ship carries a medical officer. As soon as the camp in Bombay city is ready a batch of pilgrims is admitted. Here they have all their things disinfected and elaborate precautions are taken concerning their tickets and means of identification. They are all medically examined. 1000 or more are passed through in a day and they are then taken to a camp at Pir Pao, eight miles away. This camp is a model village where the pilgrims stay for ten days usually, but this year the period has been reduced to five days. They then embark for Jeddah. Notwithstanding all the excellent precautions adopted before they leave India the Turkish Government has a rule by which the pilgrims are kept in quarantine at the island of Kamaran for ten days before being allowed to land at Jeddah. What happens to the poor pilgrims then is not published but from all accounts they are cheated and robbed every step of the way to Mecca and back.

The Government of Bengal has just issued a resolution superseding the provisions contained in the Bengal Plague Manual and conveying fresh instructions for the administration of plague measures in the province. All the penal provisions have disappeared and the so-called preventive measures are: (*a*) that municipalities are instructed to place their general conservancy arrangements on an adequate and efficient footing, especially extending their operations to the surroundings of houses of small towns, and villages are to be *encouraged* to do likewise; (*b*) in municipalities and villages as much as possible is to be done *to encourage* the destruction of rats and mice and the poison known as "rough on rats" is officially recommended for the purpose; and (*c*) inoculation is *to be encouraged* but not pressed upon the people. It is hardly necessary to refer to the enlisting and organising of unofficial help as this has everywhere proved hopeless. The preliminary arrangements in anticipation of an outbreak comprise the construction of temporary quarters for all persons evacuating their houses, but as no compulsion is authorised to be taken this instruction is almost certain to prove useless. The measures to be adopted on the outbreak of plague are disinfection, destruction of infected material and evacuation of dwellings, and removal to plague hospitals, but as nothing is to be compulsory the whole policy depends upon the will of the people. Concerning disinfection the Government has expressed the opinion that perchloride of mercury has failed of complete success and it now recommends burning of cow-dung cakes, straw, and so on, on the floors. A desiccating apparatus is to be devised. Chemical disinfection is to be available *when asked for* and phenyl is officially recommended. Even destruction of infected clothing, &c., is only to be encouraged by the offer of compensation and no compulsory measures will be adopted. With regard to evacuation encouragement is again relied upon chiefly by providing quarters. Removal to plague hospitals must only be adopted for vagrants and friendless strangers as in no other cases is pressure to be brought to bear. The other points in these noteworthy instructions refer to organisation of charity and various expenses of plague administration. Reviewing this new policy it may be said that these fresh instructions are wholly permissive upon the will of the people and depend absolutely upon what the people can be induced to do by encouragement. All experience shows that in sanitary matters they will do little or nothing.

Nov. 13th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT)

Retirement of Professor B C A Windle

Profes or Windle has received a number of marks of kind ness from colleagues and students in view of his departure from this city The annual dinner of medical students an event which always occurs about this time of year, was taken advantage of to present him with a piece of plate sub scribed for by past and present students The Chancellor of the University the Right Hon Joseph Chamberlain and Sir Frederick Treves were both present on this occasion and propo ed, the one the toast of "Past and Present Students, and the other that of "The Birmingham Medical School Nearly 300 guests sat down to this dinner and many who wished to do so were unable to obtain tickets After the conclusion of the last meeting of the Faculty of Medicine at which Profe sor Windle presided his colleagues presented him with a silver salver and set of candlesticks The presen tation was made, in the name of the rest of the members of the Faculty by Professor Jordan Lloyd who said that he hoped that the gifts which were offered would remind the Dean of his friends in Birmingham when he was far distant from them and called attention to the fact that in addition to the inscription of presentation which appeared upon the mbers of the Faculty were Professor Windle thanked gift, which would always be a pleasure to himself, his wife and his children and wished every possible success to the Birmingham School in the future The staff of the Univer ity, together with certain private friends of the two profes ors have also entertained at a banquet Professor Windle and Professor MacNeile Dixon who has recently removed to Glasgow The health of the two professors was proposed by the chairman Sir Oliver Lodge, and responded to by the two guests I am informed that Professor Windle expects to be settled in his new home at Queen s College, Cork, by Chri tmas Day

ersity

The position Dr A Robinso at Kings College London No steps have, I understand, been as yet taken e Medical Faculty also Professor Windle By a life post and carries with it a seat on the council of the University

The Welsh Water

When the new supply of water first began to make its way through the pipes into the houses of the inhabitants of the city and district its advent was at once to be recognised on account of its very peaty colour Even in a small glass water croft it is distinctly yellow and when seen in greater bulk, as in a bath, it is like a peaty Highland stream It seems however that it is only its appear ance which is against this water for at a recent meet ing of the water committee a report was presented from the city medical officer of health in which he stated that during the month of November he had been collecting samples of the water in all parts of the district having had a man specially engaged in this worl in order that the quality of the new nplete test He had analysed the was able to report that the wat where the main reservoir is sit o the houses in the city was, both from a chemical and bacteriological point of view, "entirely satisfactory" The report went on to say that there was a certain amount of colouring to the effects produced by by boiling it On the latter at boiling the water made it much lighter in colour A small amount of brownish deposit composed of peaty matter and a little iron took place He pointed out however, that the deposit from the older supply was probably about ten times as great as that obtained from the Welsh water but being lighter in colour it was less noticeable than that in the present water The general conclusion of the report was that the water was excellent and in every way save that of colour superior to that supplied up to a few weeks ago

School for D fective Children

At the last meeting of the education committee of the city a proposition was brought up from the sites and build ings committee for the purchase of a site for a school for mentally deficient children near Kenilworth It was sug gested that an area of about 22 acres should be acquired for a sum of £1700 and that a school should be erected thereon capable of containing 80 children, the plans being so pre pared that further accommodation could be provided when required Mrs Pinsent chairman of the special schools subcommittee, said that this matter had been on several occasions before the authority The subcommittee had found great difficulty in securing a suitable piece of ground They could not go too far from Birmingham they must be reasonably near to a railway station, have a good healthy site, a sunny aspect, and a perfect water supply It was only at Kenilworth that they had come across a suitable site at a reasonable price The subcommittee could see even more clearly than it did a year ago that there were certain children whom it was impossible to educate in a day special school and their presence in a day special school rendered the work more difficult Those children came f owing to their to bad influence neglected and decency into the opportunities of nmal tendencies There were also who were at the same time contin not be dealt with in the ordinary manner because industrial and truant schools did not take mentally affected children There were some few cases which had never been admitted to special schools at all because it was felt that the training which could be given them there was entirely inadequate None could be classed as idiots and imbeciles and they could not be dealt with under the existing Idiots and Lunacy Act Most of the children were capable of doing some simple form of manual employment and it was the subcommittee s belief that if trained in a boarding school they could be passed on at the age of 16 years to an industrial colony, where with the training they had previously received, they would be fairly satis factory inmates and contribute largely to their own support The Birmingham Aston and Kings Norton guardians had already formulated a joint scheme for such a colony and had obtained the con ent of the Local Government Board That scheme would carry on the work of the boarding school and the two schemes together would in the long run prevent the birth of another generation of defective children They believed the scheme they suggested would tend to lighten the burden on the community Birmingham was now supportin a generation of mentally defectives in the work houses or in the prisons which was not economical Under the scheme propo ed the children would be prevented from becoming paupers and criminals and would be largely self supporting An amendment was proposed that the matter should be referred to the subcommittee in order that it might bring up a detailed scheme with estimate, but in the end this motion was lost and the original proposal was carried

Dec 13th

LIVERPOOL

(FROM OUR OWN CORRESPONDENT)

Tropical Diseas

A DEPUTATION of Liverpool School of Tropical another expedition to study tropical diseases was recently received by the Colonial Secretary Sir Alfred J Jones K C M G the President of the school introduced the de putation which included Professor Rubert Boyce, F R S, Colonel Giles late I M S, Sir Ralph Moor Dr Evans Dr M Connell and Dr Wolferstan Thomas (the latter two gentlemen representing Canada) and Mr A H Milne, the secretary of the school Sir Alfred Jones explained that the expedition was the largest of the kind ever promoted Profes or Boyce Dr Evans, and Dr Clarke were going to Sierra Leone Gambia, &c, Colonel Giles and Dr M Connell would investigate the Gold Coast Lagos and Nigeria, while Dr Wolferstan Thomas and Dr Anton Brieul of Prague would go to the Amazon to conduct researches in yellow fever and malaria The expedition was really promoted in compliment to Sir William MacGregor, who e excellent

work in West Africa for the Empire they all appreciated. Its cost was defrayed by Liverpool merchants and the idea underlying the movement was to supplement and not to criticise or to interfere with efforts already made in the same direction by other investigators. The Colonial Secretary, in a sympathetic reply, said that the contemplated expedition was of great interest and not without some peril to those embarking in it. He personally had endeavoured to the best of his ability to carry out Mr. Chamberlain's intention regarding tropical medicine and he attached the greatest importance to what had been done and was being attempted. No service could be more honourable than that directed to making more safe and useful those regions to which Englishmen went out on behalf of the Empire. The expedition fund was headed by a donation of £500 from Sir Alfred Jones and £200 from Mr. John Holt. Professor Boyce's party will sail on Dec. 14th, Colonel Giles's on Dec. 31st, and that to the Amazon early next year.

United Hospitals' Clinical Schools: First Annual Dinner.

The first annual dinner of the United Hospitals' Clinical Schools took place on Dec. 3rd at the Adelphi Hotel, Dr. William Carter presiding over a large attendance, consisting mainly of members of the medical profession. The guests included the Lord Mayor, the Lord Bishop of the diocese, Sir Alfred L. Jones, K.C.M.G., the Rev. John Watson (Ian Maclaren), Sir Edward Russell, and others. The toast of "The City and University of Liverpool" was responded to by the Lord Mayor for the city and by Professor B. Moore (the Dean of the medical faculty of the University). The latter remarked that the clinical school had become a big slice of the University. They must be in amity with the Royal Infirmary (which, by the way, had held aloof from the scheme). Circumstances might place them in rivalry but they hoped in the long run there would be an amalgamation. The decline in the number of medical students was becoming a national problem and it was necessary to have not only the money but the help and sympathy of the city. He asked those present to send their sons and nephews as students. There were about 800 medical men in the district and 25 or 30 of them retired every year. They had only two-thirds of that number joining the school as students and half of these were Welshmen. They had unsurpassed facilities. Manchester was not their rival; what they wanted was to be "upsides" with Edinburgh. They must make the fees easy so as to cater for the man who had brains but little money and with that they must combine good teaching. Other toasts followed.

Memorial to the late Sir William Mitchell Banks.

Preliminary steps towards the establishment of a fitting memorial to the late Sir William Mitchell Banks were adopted at an influential gathering held at the town hall on Nov. 29th. The Lord Mayor presided. The following resolution was carried:—

That a committee be formed, to consist of the persons present at this meeting with power to add to their number, for the purpose of collecting subscriptions and determining the form that the memorial shall take; the Lord Mayor *ex officio* to be chairman, the town clerk and Professor A. M. Paterson to be honorary secretaries.

As to the nature of the memorial, at first it was suggested that beds at the Royal Infirmary, with which the late distinguished surgeon was so long connected, should be endowed; but the probability is that a lectureship at the University of Liverpool associated with the subject in which he was chiefly interested will be the form of memorial eventually adopted. Subscriptions amounting to £425 were announced at the meeting.

Insanitary Property in Liverpool: The Recorder's Decision in an Appeal Case.

The Recorder of Liverpool on Dec. 7th gave his decision upholding the presentment of the grand jury ordering the demolition of certain insanitary property condemned by the medical officer of health (Dr. E. W. Hope). After dealing in detail with the facts the learned recorder said the real question was whether the alterations that had been made in the house and that would, if necessary, be made in all the others were sufficient to remedy the defects existing at the time the presentment was made. He had had the advantage of inspecting the property and, in his opinion, the alterations would not be adequate to remedy the defects; therefore he thought the houses were still insanitary and the appeal would be dismissed but without costs, as the appellant had expended money and done her best in an honest endeavour to meet the requirements of the Act of Parliament. The medical profession in Liverpool have hitherto had the fullest confidence in Dr. Hope's judgment and his official actions have always been fully endorsed by them. It is gratifying to know that the views of the grand jury prevailed with the learned recorder. Had it been otherwise there can be no doubt that sanitary progress in the city would have received a decided check.

Windfall for a Liverpool Hospital.

At the Lancashire Court, sitting in St. George's Hall on Dec. 12th, before Vice-Chancellor Sir Samuel Hall, K.C., a petition was presented by the trustees under the will of the late Mr. George Fowler, a well-known Liverpool merchant, relative to points arising under the will of the deceased. Mr. Fowler bequeathed £20,000 for founding in Liverpool a hospital for incurables. The petition had relation to the administration of the £20,000 legacy for the foundation of the hospital. The trustees had come to the conclusion that the sum bequeathed was insufficient to found a hospital, but they were desirous of carrying out the testator's wishes by devoting that sum to the already existing institution in Liverpool known as the Liverpool Home for Incurables. It was explained to the vice-chancellor that the foundation of an additional hospital would possibly take the whole amount of the legacy, leaving the hospital so founded dependent upon voluntary contributions for its maintenance, and that such would inevitably detract from the contributions to the existing hospital, which is supported by voluntary contributions. It was desired to obtain the sanction of the court to make the gift to the existing institution. The vice-chancellor intimated that he was disposed to sanction the scheme.

Dec. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Gift of £25,000 to the University of Edinburgh.

THE public of Scotland were informed on Tuesday morning, Dec. 13th, that their countryman, Sir Donald Currie, had intimated to the Principal of the University of Edinburgh, Sir William Turner, that he proposed to present to the University the handsome sum of £25,000. This gift would appear to be in part, at least, one of the results of an appeal made on behalf of the University for funds to enable the University to extend its laboratory accommodation for research purposes and also to provide funds for an extension of the teaching staff, particularly for the remuneration of a staff of lecturers. The gift appears to be free from irksome conditions, for it is left to the University authorities to appoint such lecturers as they may deem advisable from time to time. Permission is given to the University to use £5000 for the purchase of a site for new laboratories should it be necessary to use a portion of the gift for that purpose. Sir Donald Currie stated in his letter to the Principal that it was his desire to assist in placing the metropolitan university of his native land on a sound and prosperous financial basis and at the same time to aid the Carnegie Trust in carrying out one of the important objects which Mr. Carnegie had in view in his foundation of a trust for the Scottish universities. Sir Donald Currie has been in communication with Lord Elgin, who, it will be remembered, is chairman of the executive committee of the Carnegie Trust, with a view to have the money granted for a like purpose by the Carnegie Trust available for the session 1905-06. The intimation of this handsome gift was announced to the court of the University of Edinburgh at its meeting on Monday last, Dec. 12th. The court not only expressed its full sense of the important provision which the gift will enable it to make for the development of the teaching power of the University and recorded its grateful thanks to Sir Donald Currie, but it further decided to designate the fund "The Sir Donald Currie Lectureship Endowment Fund." It is needless to say that the academic public will await with interest the intimation of the mode of application of this fund.

Royal College of Physicians of Edinburgh.

At the meeting of the College held on Dec. 1st Dr.

John Playfair was elected President of the College, Dr Thomas S Clouston, Vice President, and Sir Thomas R Fraser, Sir John Batty Tuke, Dr Charles E Underhill, Dr James Ritchie, and Dr R W Philip were elected to the council The council subsequently selected the examiners for the licence, the membership, and the diploma in public health, and made the following appointments for the ensuing year Dr Peter A Young, treasurer, Dr Harry Ramsy, secretary, Dr D Berry Hart, librarian, and Sir John Batty Tuke curator of research laboratory

Royal Medical Society, Edinburgh

At a meeting on Dec 2nd Dr H J Dunbar delivered his presidential address, the subject being the History of Surgery in Edinburgh He commenced by giving an account of the foundation of the University and of the two Royal Colleges and went on to discuss the three Munros and the disputes which at that time occurred between the physicians and surgeons After alluding to John and Charles Bell, Liston, and Syme, he concluded by relating the circumstances connected with the origins of the old and new infirmaries Dr W E Carnegie Dickson proposed and Dr H D Shepherd seconded a hearty vote of thanks

Dec 13th

IRELAND

(FROM OUR OWN CORRESPONDENTS)

The Ulster Medical Society · Annual Dinner

THE annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Dec 3rd Dr W Calwell, the President, occupying the chair There was a large attendance of members and invited guests After dinner the President proposed in happy terms the toast of The King," referring to His Majesty's close connexion with the medical profession and to his visits to Ireland Dr John Campbell proposed "The Lord Lieutenant and Prosperity to Ireland and spoke of the efforts of both Lord and Lady Dudley in ameliorating the condition of the poor and suffering of Ireland Sir Otto Jaffé, Lord Mayor of Belfast, in responding, brought out the interesting fact that in the present epidemic of small pox in Belfast not a single patient had been admitted into the small pox hospital who had been revaccinated, and as an indication of his own thorough belief in revaccination and to show his admiration for the father of that practice he offered to present a bust of Jenner to the Belfast Medical Institute which the President on the part of the Ulster Medical Society, cordially accepted and thanked very warmly the [illegible] named that the members [illegible] to mark their sense of [illegible] had, on condition that they kept it up, presented the Ulster Medical Society with that building in which they now met Accordingly they arranged to present him with his bust, to be placed in the Medical Institute, and thus to commemorate his generosity They asked Sir Lauder Brunton to unveil it and to propose the health of the donor Sir Lauder Brunton then in an interesting speech referred to Sir William Whitla's good personal and professional qualities, to his generosity in giving such an institute to the members of the medical profession in Belfast, and concluded by unveiling the bust and proposing his health Sir William Whitla, in responding, thanked the members, the artist (Miss K Shaw) and Sir Lauder Brunton for the compliment paid to him and said it afforded him great pleasure to make such a gift to the medical profession Professor J A Lindsay in proposing "The Dublin Schools of Medicine, referred to the prestige and antiquity of the Dublin School, to the able men it had produced, and to the good work it had done on behalf of medical education Mr A Chance (President of the Royal College of Surgeons in Ireland) Profes or [illegible]), and Sir John W [illegible] entary terms to the [illegible] ance spoke of the [illegible] the Government of [illegible] a poor country and [illegible] made on the teachers of these Irish medical schools Professor Smith dwelt on the fact that admirable men had gone out to practise trained in Dublin and Belfast, while Sir John Moore said that if the President dined with the Dublin College of Physicians on next St Luke's Day he would have an opportunity of taking snuff out of one of their most precious relics—Jenner's snuff box Dr J Walton Browne proposed the toast of "The Guests, to which Sir Lauder Brunton, the President of Queen's College, Belfast, and Sir Thomas Myles replied Dr Charles Kevin then proposed the health of the President, referring to his popularity, the confidence which the profession had in him, and his excellent management of the affairs of the society The President thanked the company for the very kind way in which they had received the toast and concluded by giving a toast received with great enthusiasm—the health of Dr Thomas Houston, the secretary of the Ulster Medical Society, who had spared no pains to make that evening a complete success Dr Houston replied During the evening excellent vocal and instrumental music was much enjoyed

The Dispensary Medical Officers of Ireland

A case of much interest and importance to the dispensary officers of Ireland was concluded on Dec 8th, when the Lord Chief Baron gave judgment The case was tried in the King's Bench Division, the leaders of the Irish Bar were engaged including the Attorney General and Solicitor General, and it occupied three days Two dispensary medical officers, Mr M Keelan and Mr M Caraher, of the Ardee union, challenged the right of the Local Government Board to abolish a certain dispensary district in the union and to enlarge the adjoining districts of which the applicants were the medical officers The Lord Chief Baron in delivering the judgment of the court and in dismissing the application said that the court must not be taken as pronouncing any opinion upon the vexed question as to what was the proper remuneration that should be allowed to dispensary medical officers He said "that he considered that the Local Government Board had the power to alter dispensary districts when they were satisfied that such could be done without injury to the sick poor but that he thoroughly appreciated the hardship that this would involve to both these medical gentlemen, especially to Mr Keelan who had worked up a private practice of £500 or £600 a year which he might have to give up or resign his position as a dispensary medical officer, but the rights of the medical officers were subordinate to the duties of the Local Government Board who had to see that the Medical Charities Act was efficiently carried out The application of the medical men was accordingly dismissed with costs The previous history of the trouble is as [illegible] dispensary of the [illegible] advertised again [illegible] for the appointment at its former salary The guardians then applied to the Local Government Board which refused to allow them to raise the salary and advertise the vacancy at £150 On the other hand the Local Government Board held a local inquiry and determined to abolish the dispensary appointment and to me [illegible] ones The board of guar[illegible] course and at the subseq[illegible] examined—clergymen of all denominations members of the county and district councils and gentlemen residing in the neighbourhood—agreed in condemning the proposed change in the dispensary districts The Local Government Board was not influenced and made the change by sealed order

Popular Public Health

In contrast with the somewhat vague statements of the Resident Commissioner of the National Board the Catholic Truth Society of Ireland has made a practical move in issuing a small book entitled 'A Sanitary Sermon,' by Dr J L Dowling physician to St Jarlath's College Tuam It has been most favourably reviewed by the *Irish Times* and other popular journals as being simple interesting, and useful Moreover it costs only 1*d* and is to be on sale at all Roman Catholic churches in the country Its title is perhaps derived from the fact that the present Archbishop of Tuam has for years made it a practice to deliver one sermon annually on Health and Cleanliness

Dec 13th

PARIS

(FROM OUR OWN CORRESPONDENT)

The Academy of Sciences

THE Academy of Sciences has just elected a titular member in the section of medicine and surgery in the room of M Marey deceased The section proposed M Dastre

The number voting was 58 and at the first ballot M. Dastre received 54 votes. Born in 1844, a doctor of medicine of the Faculty of Paris, he has for almost 20 years held with high reputation the chair of physiology at the Sorbonne.

The Fight against Tuberculosis.

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Dec. 13th.

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(FROM OUR OWN CORRESPONDENT.)

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THE State of New Jersey has passed an Act to restrain epileptic, insane, and feeble-minded persons from marrying. It makes it unlawful for any person who has been confined in any public asylum or institution as an epileptic or insane or feeble-minded patient to marry in that State without a certificate from two regularly licensed physicians of the State that such person has been completely cured of such insanity, epilepsy, or feeble mind, and that there is no probability that such person will transmit any such defects or disabilities to the issue of such marriage. The law further provides that any person of sound mind who shall marry such epileptic, insane, or feeble-minded person, with knowledge of his or her disability, or who shall advise or

aid or assist in procuring such marriage, shall be guilty of a misdemeanour.

Opposition to Indiscriminate Medical Relief.

The Board of Regents of the University of Michigan passed a resolution to the effect that the medical faculty of the University must grant gratuitous medical and surgical treatment to everybody applying therefor, whether rich or poor This action is condemned by the profession of the State and one county medical society enters the following protest 'Such a condition is contrary to all customs and rules governing the relation of one citizen to another, it deprives the medical citizens within the radius of the influence of the University of Michigan of part of their rights in an unwarranted manner and is harmful to the State as well as to the medical profession." A delegation was appointed to confer with the regents with a view to induce them to rescind their action

A National First-Aid Society

It has been proposed by a society in Chicago to establish a national first aid society under the title of the 'American White Cross First-Aid Society " The objects of the society are to educate the public in the principles and methods of first aid emergency treatment of those injured by accident or suddenly stricken by illness, to instill ambulances, stretchers, and first aid material at places which may be considered necessary, to organise volunteer ambulance brigades for service in peace and in war, and to contribute personal and material aid for the mitigation of national disaster. A committee has been appointed to take immediate steps to arrange for the incorporation of the society The value of such a society which will constantly diffuse the knowledge required to care for those stricken down by accident or suddenly taken ill cannot be over estimated in these days of rapid transit by innumerable vehicles

New Procedure in the Trial of Cases of Rape

The legislature of Virginia has passed an important measure modifying the procedure of courts in the trial of cases of rape It provides that before or during the trial of an indictment for rape, or attempted rape, in which the female who is alleged to have been assaulted is a witness, the judge of the court in which the same is tried may, in his discretion, direct that the deposition of such witness shall be taken at a time and place designated in the order Such deposition shall be taken by the said judge, by the clerk, or by any officer authorised to take depositions in the presence of the said judge, who shall rule on all questions of evidence and otherwise, the taking of the same being conducted in the same way as though it were being taken in open court There shall be present also the attorney for the Commonwealth, as well as the accused and his attorneys, who shall have the same rights in regard to the examinations of such witness as if she were testifying in open court and no other person shall be present unless expressly permitted by the judge Such deposition shall be read to the jury at the time such witness might have testified if such deposition had not been taken and shall be considered by them and shall have the same force and effect as though such testimony had been given orally in court But the clerk of the court, in case no appeal is taken, shall after the time for granting a writ of error has elapsed withdraw the deposition from the record and destroy the same.

Fourth Pan-American Medical Congress

The Congress will meet at Panama on Jan 2nd, 1905, and continue for four days A large number of delegates are preparing to attend from this country The Panama Government has appropriated $25,000 for the scientific session and entertainments The Congress is divided into sections embracing the usual practical branches of medicine, surgery, and hygiene The afternoons will be devoted to scientific work and the morni[illegible] social functions. The [illegible] has proved very great [illegible] They have brought about a mutual understanding in regard to methods of prevention of the great scourge of these tropical regions and the resulting cooperation of all the health authorities of the different countries along the same lines has practically suppressed if it has not exterminated this plague

Prohibition of Athletic Contests of Endurance

of New York This action is taken to prevent the six days contests in bicycle and running races which have latterly been so frequent and so distressing The new ordinance limits such contests to a p[illegible] This ordinance will receive [illegible] for these contests have been the source of popular disfavour for years

American Surgeons at the Seat of War

The General Staff has decided to send American surgeons as attachés to the Russian and Japanese armies provided the consent of the two Governments can be secured It appears from the reports of American surgeons who have visited and observed the operations of the medical department of the Japanese army that we have much to learn as to the proper organisation and management of the details of that branch of service in the field The success of the Japanese in the treatment of wounds and in preventing sickness among the troops far exceeds anything heretofore known It is evident, therefore, that our army surgeons can learn many useful lessons if permitted personally to observe the details of management of the medical service of that army

Sanitary Regulations of Barbers and Barbers' Shops

The effort of the Department of Health of New York to improve the sanitary condition of the barbers' shops is progressing favourably and will evidently result in a great reform in the management of these unpleasant and often disease breeding resorts The following are the provisions of the Sanitary Code Every barber's shop in the city of New York shall be conducted in accordance with regulations adopted from time to time by the Board of Health The following are the regulations adopted by the board 1 Barbers must wash the hands thoroughly with soap and hot water before attending any person 2 No alum or other astringent shall be used in stick form If used at all to stop the flow of blood it must be applied in the form of powder 3 The use of a powder puff is prohibited 4 No towel shall be used for more than one person without being washed 5 The use of sponges is prohibited 6 Mugs and shaving brushes shall be thoroughly washed after use on each person. 7 Combs, razors, clippers, and scissors shall be thoroughly cleansed by dipping in boiling water or other germicide after every separate use thereof 8 No barber, unless he is a licensed physician, shall prescribe for any skin disease 9 Floors must be swept or mopped every day and all furniture and woodwork kept free from dust. 10 Hot and cold water must be provided 11 A copy of these regulations is to be hung in a conspicuous place in the shop Customers are recommended to have their own brushes, combs, razors, and cups in order to avoid as far as possible the contracting of contagious skin diseases and are requested to report any failure of barbers to comply with the above rules

Poisoning by Wood Alcohol

Twenty deaths by drinking whisky, adulterated with wood alcohol, in this city emphasise the action of the American Medical Association at its last session, which was to the following effect. It was resolved that the House of Delegates, recognising the dangerous character of wood alcohol and liquors containing it, believes that it should be placed on the list of poisons The preamble alleges that wood spirit or methyl alcohol is known to have been responsible for numerous deaths and many cases of blindness in this country during the past few years, even the breathing of confined air charged with the fumes of this form of alcohol has been shown to produce blindness It is asserted that 'Columbian spirits" and other "deodorised" forms of this deadly poison are being substituted for the innocuous, or less injurious, grain alcohol in all sorts of liquids which are used The 20 deaths in this city occurred among labouring men who obtained their whisky from a single saloon The excitement was so great that a mob wrecked the saloon The farther recommendation of the association is that the Federal and State authorities should take the necessary measures to protect life and eyesight from the pernicious influence of this poison

Report of the Scientific Exhibit of the American Medical Association.

This is a report of the fourt[illegible] association which is remarkable [illegible] excellence of the specimens exhi[illegible] of the exhibit have been abu[illegible] large attendance at these exhibitions and the [illegible] given to the explanations afford ample proof of their success

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Officer.

EDINBURGH . . . (1) Public Health
Laborato . . . 71 (4) Anatomy, in-
cluding . . . ractice of Medicine,
(7) Midw . . . (9) Public Health
, Sanitary Law, and

L.—Assistant House
with board, lodging,

tesbury avenue, W.C.—
ed. Honorarium £40 a

Health. Salary £100

THE CHEST, Brompton.
. Honorarium of £25.
rgeon. Salary £40 per

. . . superintendent Salary
£500 per annum, rising to £600, with board, lodging, and attendance.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Two House Surgeons and a House Physician. Salary £60 each per annum, with residence and maintenance.

LONDON COUNTY ASYLUM, Claybury, Woodford bridge, Essex.—Junior Assistant Medical Officer. Salary £160 per annum, with board,

. . . OF GLASGOW.—Professor of Physiology. Salary £600, with fees.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney road, Bethnal-green, E.—Pathologist and Bacteriologist. Salary £50 per annum,

. . House Physician. Also
with board, lodging, and

LL HOSPITAL.—Honorary

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's Inn road, W.C.—Assistant Surgeon to Out-patients.

. . . FIC., Henrietta street, Covent

. . . n. Salary £110 per annum, with

. . . AL.—House Physician. Salary £75,
, and attendance. Also Assistant
annum, with board, apartments,

in Medicine, Surgery, Anatomy,
Forensic Medicine and Hygiene,

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Births, Marriages, and Deaths.

BIRTHS.

. . . Middlesex, on Dec. 8th, the
a son
, Highgate, on the 9th inst.,
. . . R.C.S. Eng., of a son.

MARRIAGES.

BENTLEY—CONSTABLE.—On Dec. 8th, at Rusthall parish church, Tunbridge Wells, Harold . . .

SHA . . .

DEATH.

LUSH.—On Dec. 7th, at Dorchester, William George Vaudrey Lush, M.D., F.R.C.P. Lond., F.R.C.S. Eng.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

UNIVERSITY DEGREES FOR LICENTIATES OF THE CONJOINT BOARD.

THE diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England are the most usual qualifications entitling the holders to practise medicine in England, for it is only a minority of the profession who commence their studies by matriculation at a university and afterwards in due course proceed to graduation. As certificates of medical training and guarantees of professional capacity the licences or diplomas of the Royal Colleges are in no respect inferior to the degrees conferred by the universities, but the fact nevertheless remains that for some reason or other, which is perhaps not altogether unconnected with sentiment, many holders of the College licences would in after life like to add M.D. to the letters which they are entitled to attach to their names. A university, however, does not limit itself to the examination of candidates for its degrees and usually imposes on its would be graduates conditions which could not be fulfilled by men actually engaged in medical practice. Such conditions may be of various kinds, but in general the most onerous are compulsory residence and study for at least a year or two at the university in question, prolonged intervals between the successive examinations, and preliminary examinations in literary and scientific subjects unconnected with the ordinary medical curriculum. The University of Durham has here come to the rescue by instituting special examinations for an M.D. degree obtainable by registered practitioners not less than 40 years of age, the University of St. Andrews is available to a limited extent, and the University of Brussels offers still easier terms. A correspondent who is on the sunny side of 40 years, and is anxious to possess an M.D. degree not from a foreign source but from an English one, writes to us as follows:—

> Would it not be possible for the University of Durham to reduce their age limit from 40 to 35 and 14 years qualified? ..... My suggestion is that either Durham or some of the other universities should give an M.D. after examination to men over 35 and not less than ten years qualified. ... I hope the subject will be taken up by others in your columns.

Arguments on the other side would no doubt be forthcoming if required. An obvious one would be that the line must be drawn somewhere and that those who to obtain the coveted distinction have "borne the burden and heat of the day" at the Universities of Oxford or Cambridge or London might be inclined to protest against any extensive relaxation of the existing system.

THE SALE OF PATENT MEDICINES AND DISPENSING BY PRACTITIONERS.

WE not infrequently receive letters complaining of the apathy of the General Medical Council in matters affecting the material interests of the profession, especially in connexion with the suppression of unqualified practice. The Council might conceivably in some instances use its influence more than it does but its sphere of action and its authority are limited, as we take an opportunity of pointing out each year in our *Students Number*. A correspondent who writes to us from a Lincolnshire town has, however, apparently over-estimated its authority for after very justly condemning the extensive use of patent medicines and the fraudulent statements contained in the advertisements of them, he goes on to propose the following remedy which can hardly have any immediate prospect of coming into operation:—

> Let the medical representatives in Parliament bring in a Bill at the instance of the Medical Council for the suppression of all patent medicines (not forgetting the infants' foods which every medical practitioner sees daily are ruining the youngest members of this generation), and to counteract the severe effect that this would have on the ordinary chemist let the Medical Council prohibit practitioners from dispensing except during certain hours of the night if urgency requires it.

RAILWAY ACCIDENTS AND "TEMPORARY MENTAL ABERRATION."

IN an editorial article the *Engineer* of Dec. 9th discusses the great frequency of railway accidents in the United States of America and enumerates various explanations of the fact. In the United States last year 3787 passengers and servants were killed and 51,343 were injured in train accidents. In the previous year 3564 were killed and 45,977 injured, while in 1902 the numbers were 2819 killed and 29,800 injured. There are in the United States about 250,000 miles of railway, or ten times as much as in Great Britain, but the density of the traffic, the number of trains run and of passengers carried, places this country more nearly on a level with the United States than appears at first sight to be possible. Within in 1902 out of 11,820,000 passengers . . . shunters are caught under trains or between buffers. In the United

Communications, Letters, &c., have been received from—

A.—Dr. Lombe Atthill, Monkstown; Dr. M. da Rocha Amorim, Entre-os-Rios, Portugal; Anglo-American Pharmaceutical Co., Lond.; Messrs. Adlard and Son, Lond.; Messrs. Arnold and Sons, Lond.; Dr. John Anderson, Glasgow; Mr. F. M. Aldred, Abergele.

B.—Mr. W. P. Bothamley, Lond.; Messrs. J. Buchanan and Co., Lond.; Mr. H. D. Blackmore, Sydney, New South Wales; Dr. F. L. Benham, Semaphore, South Australia; Mr. Haydn Brown, Lond.; Dr. Harold Burrows, Lond.; Blackburn and East Lancashire Infirmary, Secretary of; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. H. Beattie, Lond.; Dr. W. Blair Bell, Liverpool.

C.—Mr. W. H. Clayton-Greene, Lond.; Messrs. Cosenza and Co., Lond.; Messrs. Carnrick and Co., Lond.; Cortland Wagon Co., Lond.; Messrs. E. Cook and Co., Lond.; Messrs. J. and A. Churchill, Lond.; Dr. G. Crichton, Lond.; Mr. H. S. Clogg, Lond.; Messrs. Cassell and Co., Lond.

D.—Messrs. Down Bros., Lond.; Mr. Frank A. Derry, Lond.; Mr. W. Henry Duncan, Margate; Mr. J. G. Duncanson, Lond.; Dorset County Hospital, Dorchester, Secretary of; Messrs. A. de St. Dalmas and Co., Leicester; D. G. G.; Mr. D. J. Drake, Thakurbari; Dowsing Radiant Heat Co., Lond.; Messrs. Duncan Flockhart and Co., Lond.

E.—Dr. J. W. Eyre, Lond.; Messrs. Evans, Sons, Lescher, and Webb, Liverpool; E. R. W.; E. C. H.

F.—Dr. A. Foxwell, Birmingham; Dr. J. D. Frame, Philadelphia; Mr. Gustav Fischer, Jena; Dr. F. E. Fremantle, Paris; Dr. J. S. Fairbairn, Lond.; Dr. J. M. Fortescue-Brickdale, Clifton; Dr. Andrew Fullerton, Belfast; Mr. J. H. Fox, St. Helen's.

G.—Dr. G. Gresswell, Grimsby; Galen Manufacturing Co., Lond.; Mr. L. P. Gamgee, Birmingham; Rev. Charles Gib, Lond.; Dr. H. E. Gamlen, West Hartlepool; Messrs. Garrett and Son, Lond.; Mr. W. J. Gray, Doncaster; Professor Goubaroff, Moscow; Mr. D. Gillies, Glasgow; Messrs. F. Gould and Co., Lond.; Guildford, Town Clerk of.

H.—Dr. P. Horton-Smith, Lond.; Mr. C. A. Hoeffteke, Lond.; Dr. R. Hastie, Bradford; Hospital for Sick Children, Lond., Secretary of; Mr. T. Harling, Muker; Dr. W. H. Horrocks, Bradford; Hospital for Epilepsy, &c., Lond., Matron of; Mr. S. W. Huber, Philadelphia; Mr. W. B. Heyward, Launceston, Tasmania; Dr. G. E. Herman, Lond.; Mr. C. Harris, Bournemouth; Hospital for Diseases of the Throat, Lond., Dean of; Mr. George H. Hewitt, Liverpool; Messrs. Hussey and Gillingham, Adelaide.

I.—Mr. W. B. Irving, Chorley.

J.—Dr [illegible] Dr. [illegible] J. S. [illegible] John [illegible] elyn [illegible]

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An Address

ON

THE RESTORATION OF HEARING AFTER REMOVAL OF THE DRUM AND OSSICLES BY A MODIFICATION OF THE RADICAL MASTOID OPERATION FOR SUPPURATIVE EAR DISEASE.

FOUNDED ON THE EXPERIENCE OF 400 OPERATIONS.

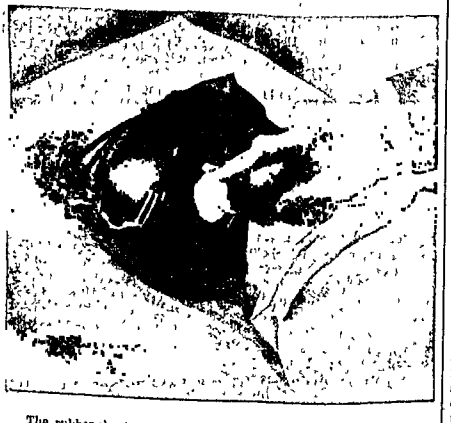
Delivered before the Otological Society of the United Kingdom on Dec. 5th, 1904,

BY CHARLES J. HEATH, F.R.C.S. ENG.,
SURGEON TO THE THROAT HOSPITAL, GOLDEN SQUARE, LONDON.

MR. PRESIDENT AND GENTLEMEN,—It is not without some diffidence that I am bringing to your notice the operative methods I adopt with a view of restoring hearing and arresting discharge in chronic suppurative ear disease, but having frequently been asked by members of this society to bring the matter forward I hope you will forgive me should I fail to be of interest. I am told my methods differ so greatly from those of other surgeons that you may not be unwilling to examine them and I trust I may provide something worthy of discussion.

You may remember that I showed a large number of cases with restored and excellent hearing at the meeting of the society just a year ago. Since then I have performed the operation just 100 times and with increasing confidence that [illegible] will [illegible] large [illegible] sease. [illegible] year ago there was a prolonged discussion on the cases I showed but I had no opportunity then of explaining my method of operation. It would be superfluous in this society to give the reasons which induce

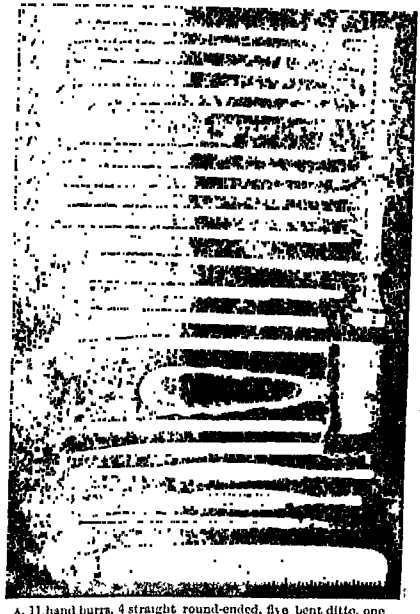
FIG. 1.



The rubber sheet cap in use, clipped over the forehead with long curved forceps; the ear turned forwards exposing the whole area of operation.

the surgeon to decide on operation, so I will at once proceed to enumerate the advantages of my method of operation, to explain the details of it, and to show the instruments I have designed for performing it, which have all been made for me by Messrs. Mayer and Meltzer of Great Portland-street, W. The advantages are: (1) little shock to the patient, as the operation can be performed in half an hour; (2) there is no disfiguring scar; (3) there is no shaving of the head; (4) the after-treatment is easy for both patient and surgeon; (5) the surgeon familiar with this operation can usually tell with the aid of the instruments I employ not only the direction in which the antrum lies but the depth of the cavity and can often define its dimensions before removing any bone; and last, and most important of all, a considerable amount of hearing is restored and preserved in a vast majority of the patients.

FIG. 2.



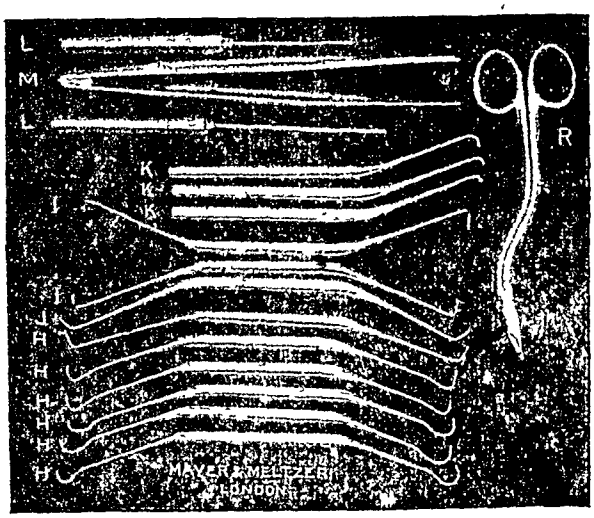
A, 11 hand burrs, 4 straight round-ended, five bent ditto, one flat ended, and one conical, all fitting the same handles. B, One guarded hand gouge, fitting the same handles. C, D, Soft E, One Two pairs of probe pointed scissors (one pair with thin blades for cutting the hair very close, the other pair for fashioning the flap from the cartilaginous meatus).

Over the preliminaries I will be brief. The day before the operation the head and hair should be washed and dried, the ear syringed with some warm antiseptic lotion but not plugged, whereupon the ear and neighbouring skin are packed in a wet boric compress and covered with waterproof. This dressing is removed on the operating table, when the few short hairs that grow near the top of the front of the ear are cut away with scissors. The square rubber sheet cap shown in use in Fig 1 has an aperture near each of the four sides and through the one most suitable in size for the patient the ear is passed. The sheet is then wrapped round the head and opposite ear so as to completely cover the forehead and hair, leaving only the affected ear and adjoining skin visible through the aperture; this done the sheet is fastened on the top of the forehead with long curved forceps, shown in use in Fig. 1, and remains firmly fixed until the end of the operation. In this way all the hair is kept away from the wound during the operation and the head and hair are prevented from getting soiled with blood or lotion, thus saving much time and trouble in cleaning and drying after the operation, and obviating the necessity of shaving a large part of the head which is a great consideration, especially in the case of women.

I begin the incision at the top of the ear, just above the upper attachment of the pinna and in the angle where the cartilage joins the scalp and continue it round to the back of the ear in the angle all the way until it reaches as

far down as the bottom of the bony meatus. The incision must be made while the ear is in the natural position, for if the latter be turned forward at the time of the incision the skin will be drawn off the head and the wound will ultimately prove to have been made too far back. Its length does not exceed from one and a quarter to one and a half inches, according to the size of the ear. The first incision is limited to the depth of the skin; the ear is then pulled forwards, thus widening the incision, which is now deepened until the temporal fascia and pericranium are reached; the tissues superficial to these are carried forward with the concha until the cartilaginous meatus is seen; this must be thoroughly defined and the whole of the superior quadrant exposed by separating the upper part of the concha from the temporal fascia; the posterior quadrant must next be cleared of post-auricular muscles, and lastly the posterior half of the inferior quadrant of the cartilaginous meatus must be bared; thereupon a crescentic incision commencing on the supra-meatal ridge of the zygoma is carried round the exposed cartilaginous meatus and should reach the bone; the tissues within this crescentic incision are now separated from the bone far enough to expose the margin of the bony meatus and post-meatal spine. Then the meatus separator (E, Fig. 2) can be usefully employed and the cartilaginous meatus within the same limits must be carefully separated, and in continuity with it the skin extending all the way to the drum membrane can also be raised and saved and at the completion of the operation will be found valuable for covering a large area of bone and in providing a thin and shelving edge of epithelium to grow over adjoining bone as soon as granulations have formed, and moreover it reaches much farther within the cavity and therefore covers more bone than is possible when only the cartilaginous meatus is preserved. By this plan no more bone is bared than will need to be removed during the operation and the temporal fascia is unopened. The cartilaginous and cuticular lining of the anterior part of the bony meatus is neither moved nor damaged, so it is not likely to become swollen and thus to interfere with the proper inspection of the tympanum during the healing of the wound. Having

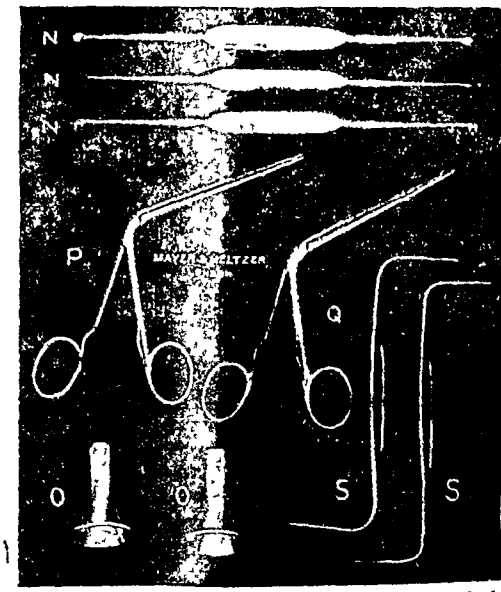
FIG. 3.



H, Six double ended antrum probes for localising the antrum; these are suitable for both ears. I, Two ditto, one for each ear. J, One double protector for shielding the facial nerve when removing the bridge. K, Three operating probes; the smaller ones are necessary when the antrum is small. L, Two soft copper probes with handles; they are more malleable than silver and the handles facilitate their manipulation. M, One German silver sponging forceps for mopping out the cavity during the operation. R, One suture scissors for removing the stitches without the aid of any forceps.

controlled the hæmorrhage a narrow retractor (S, Fig. 4) is placed in the back part of the bony meatus and the tube of cartilage and skin is pressed against the front wall of the passage and is thus out of the surgeon's way. The operator can now explore the tympanum and through it the aditus and antrum. In Fig. 3 are shown (H) a number of double-ended probes—I call them antrum probes—one or other of which can be depended upon to pass into the antrum. Often it will go far into the cavity and the point can be turned outwards towards the skin, so that one can say, "This will be an easy antrum to open; it is large and the bone covering it is thin," and when this is the case you will see how confidently one can use the mallet and gouge. I frequently open the cavity in removing the first piece of bone and in more difficult cases where the antrum is small and deep, the bone sclerosed, and there is no indication from its structure that one is approaching the antrum, it is a satisfaction to know, with the aid of such probes, that one is working in the right direction and that the cavity is almost reached. Having defined the situation of the antrum as far as the probe has entered it and the position of the point is known by the indicator on the handle, should it have gone into the usual site of the antrum, it is proof that the lateral sinus is not misplaced and anxiety on that point is removed

FIG. 4.



N, Three double-ended curettes. O, Two mastoid specula for use during the after treatment; their shape enables them to remain in the cavity without being held. P, One spoon forceps for removing ossicles, granulations, and remains of the membrana tympani. Q, One stapes nipper. S, Two retractors for holding the cartilaginous and cutaneous meatus against the front wall of the meatus during the operation on the skull. The varying length of the ends are adapted to suit the varying depth of the meatus.

and I have been able by the aid of these instruments to foretell the dangerous position of the lateral sinus before exposing it. It is well to act as though the antrum extended somewhat lower than the probe, for it often does so, and, moreover, the bone below has to be removed at some stage of the operation, so there is no objection to doing it early. Here let me point out that if the cavity be large the post-meatal spine does not indicate the spot where the antrum comes nearest to the surface. A portion of the posterior wall just below the spine should be removed and this in my opinion is best and most quickly done with mallet and gouge; the instruments I use are shown in Fig. 2, D and C. If the antrum is not at once seen the opening in the bone can be deepened at the same time as it is widened vertically without extending further backwards. The probe will always tell the direction of the antrum should it prove to be deep. In a large majority of the cases I have operated upon I have found the antrum entirely in the pars petrosa, quite beyond the region of the mastoid process. Having found the cavity and made an opening large enough for a bent probe to enter, it should be explored and certain points cleared up, such as whether there is exposure of dura mater or lateral sinus, one of which conditions will be found in quite half the cases that come under operation. The opening can now be enlarged and the cavity followed and all irregularities smoothed out, and for this purpose the very long burrs shown in Fig. 2 (A) are most useful, inasmuch as they are not only long enough for both hands to be used, the right to drive and the left to steer, but

they allow the hands to be kept far enough away from the wound for the surgeon to be able to see how the work is progressing, by their means also the bone can be removed very rapidly if necessary and the bent ones can be worked in difficult positions, as, e g, round a corner I rarely enlarge the antrum more than just enough to remove all mucous membrane and to open out all recesses, for nature usually provides an inflammatory barrier round the cavity, blocking up the adjoining cells, and it is unwise to destroy this defence For the purpose of removing the bridge over

easy to remove the malleus and incus for which purpose I have found the spoon forceps shown in Fig 4 (P) of great assistance, and have never known an ossicle to slip once the forceps has taken hold The instrument is also useful for tearing away the remains of the drum and any large granulations that may be present

The most difficult part of the operation is the treatment of the tympanum itself I am accustomed to remove the mucous membrane of the attic after thoroughly exposing it by removal of all overhanging bone The mucous membrane of the lower part of the tympanum, including the oval window, I prefer to leave if the Eustachian tube is in good working order The projecting part of the stapes I remove with fine nippers (Q Fig 4) If the Eustachian tube is obstructed I leave but the mucous membrane surrounding and joining the round and oval windows The whole mucous membrane of the tympanum I destroy only when there is nerve deafness and no prospect of restoring hearing Having completed the operation on the deeper parts it is necessary to smooth and to enlarge the new meatal canal so as to make it of the same size in its whole length and the anterior part of the original bony meatus remains as the anterior part of a much enlarged meatus

It is now necessary to shape the meatal flap A pair of long dissecting forceps being inserted into the cartilaginous meatus and opened widely will render the parts tense a scalpel can now be entered from above and made to cut its way into the lumen of the meatus just internal to the concha A pair of fine probe pointed scissors are then used with one blade in this opening and the meatus is divided along the top from without inwards towards the tympanum but rather nearer the anterior than the posterior wall An incision at right angles to the commencement of this incision is now made backwards and downwards as far as the middle of the floor of the cartilaginous meatus passing close to the concha all the way Thus a large flap is formed consisting of rather more than the posterior half of the meatus This flap now falls downwards and backwards covering the floor and part of the posterior wall of the newly enlarged meatus The edge of the cartilaginous flap reaches to the pericranium which was left right up to the margin of the bony meatus in order that the flap might be stitched to it Catgut is used for this stitch as it is buried when the ear is replaced The knife is now passed through the orifice of the cartilaginous meatus and an incision is carried upwards and slightly backwards until the opening is large enough to allow the surgeon's little finger to enter The bleeding having been arrested the whole cavity is dried and should be swabbed with some powerful antiseptic, a drainage tube, as large as will go in is inserted and it should be long enough to extend from the antrum to a short distance external to the tragus The ear is now replaced and stitched in its natural position, the wound usually healing by immediate union on account of the fact that soft tissues only are involved no bone being uncovered, moreover, the employment of the large tube has the effect of taking tension off the stitches A well squeezed and large wet dressing covered with waterproof soaks up discharge better than a dry one and can be removed with less discomfort to the patient as it does not adhere The bandage should not be passed under the chin but should be kept entirely round the cranium so that it may not be soiled by vomit, and pressure, if such be necessary, can there be tolerated

With regard to the after treatment on the next day I remove the dressings mop out the cavity as far as possible through the tube, swab with some antiseptic, remove one or two stitches and put on a dressing similar to the first but somewhat smaller as the discharge will be less The bandage can now be taken under the jaw On the second day I remove the dressings and the tube, examine and mop out the cavity thoroughly through a large speculum which I have designed to stay in without holding (o Fig 4) remove any organised clot or lymph dry and then swab with iodoform emulsion, and replace the tube The discharge will now be very slight and the patient after the mopping can generally hear a faint whisper By this time the post aural wound is usually healed and the remaining stitches are removed The patient is generally allowed up with a small wet dressing daily applied until granulations have formed At night a firm dressing and bandage are applied to protect the ear You may have observed that no mention has been made of syringing the ear it is not, in my opinion desirable to do so A rise of temperature is most unusual as the drainage is so good if granulations are too abundant during healing they may be rubbed down with a 50 per cent solution of nitrate of silver on a fine hard mop after an application of cocaine Some of the best results I have seen have been in cases in which spirit drops were used from the second or third day, in these patients the wounds appeared to remain much as they were left at the operation, healing almost without granulations or discharge I do not aim at early dryness of the mucous membrane of the tympanum if the Eustachian tube be in good working order and though in process of time it will dry yet hearing will not then be lost The drainage tube is used in diminishing sizes until the wound is nearly healed for it keeps the passage large and straight so that the deeper parts are visible and accessible when finally removed the orifice will in a few days return to its natural size I am convinced that tight plugging over the windows in the tympanum or scars involving these openings, and such always result from the usual operation are responsible for the loss of hearing after complete mastoid operations and that it has not hitherto been realised to what an extent hearing can be restored in the majority of cases

The operation when performed with the view of effecting restoration of hearing is but little more difficult than the ordinary one but the after treatment needs much more attention in order that the two windows may not get damaged or covered with
they can be preserved in all
and good hearing will pro
they become ill the delicate structures within will surely suffer and deafness will result It does not seem to matter how extensive the disease in neighbouring parts may have been for provided the labyrinth has escaped the hearing can almost always be saved I hold that operations which usually entail destruction of the hearing and which have been customary in the past are unsatisfactory I do contend that a patent and perfect Eustachian tube should not be obliterated Time does not permit me on this occasion to deal exhaustively with all these points

I have shown you several patients this evening They have been operated upon by me in the way I have described in this paper and mostly for disease endangering life You have seen that they have no drums that they are not disfigured in some you cannot even discover where the incision was made They can hear the voice the whisper, and even the watch They have been cured of the suppurative disease which endangered their lives as well as their hearing and for all practical purposes they can hear as well as the majority of ourselves Some of them on whom both ears have been subjected to this operation hold posts where tests for hearing are applied and yet are able to hear well enough to pass muster Some have obtained situations and their employers have never even known that they have undergone this operation and that their drums have been removed Others who have been discharged from their situations for deafness have been reinstated as soon as their hearing has been restored by the operation I have just described I am speaking observe of cases of disease on both sides where it cannot have been possible that a sound ear was doing the work

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LONDON HOSPITAL MEDICAL CLUB —The annual social meeting of this club was held at the Café Royal Regent-street London W on Dec 8th Dr Percy Kidd occupied the chair and was supported by several members of the staff of the London Hospital After the usual loyal and patriotic toasts there were some recitations music and singing and an enjoyable evening was spent The benevolent scheme having been agreed to a meeting is to be held on Feb 16th next to reconstruct the rules of the club

CONGENITAL INTESTINAL ATRESIA.

BY H. S. CLOGG, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO CHARING CROSS HOSPITAL; SURGEON TO THE EVELINA HOSPITAL FOR CHILDREN.

CASES of congenital intestinal atresia are comparatively rare, hence I venture to record the two following cases which have recently been under my care.

CASE 1.—The patient was a female infant, aged six days. She was born with a prominent navel. Since birth she had passed nothing per rectum and had passed very little urine. Vomiting commenced shortly after birth and persisted in increasing severity. The vomit latterly was dark brown in colour and very offensive. When seen on the sixth day of life there was a congenital umbilical hernia about three inches in diameter; the shrunken and blackened remains of the funis were attached to the summit of this. The coverings of the hernia had a dull yellowish, opaque appearance and passed on in continuity with the skin of the abdominal wall which formed no part of the covering of the hernia. There was an offensive odour as if the bowel might have given way. The abdomen was distended and many coils in peristalsis could be seen. The rectum was well formed. The diagnosis made was a snaring of the intestine in the umbilical cord. No attempt was made to reduce the hernia, although a coil of intestine was felt in the sac; on the suspicion that it was leaking it was considered better to operate at once without any attempt at reduction.

An incision was made around the base of the hernia and above the latter in the mid-line of the abdomen. The peritoneal cavity was opened above the sac after ligature of the umbilical vessels. The intestine entering the hernial sac was exposed and an attempt was made to withdraw this. This was unsuccessful and the sac was therefore slit up and the adherent intestine was separated. It was then noticed that this intestine ended blindly in the sac; there was no loop returning to the abdominal cavity. The intestine was clamped and the whole sac was removed. I then drained the small intestine and again clamped it. I now tried to find some large intestine with which to anastomose the ileum. Feeling first in the right iliac fossa and then on the left side and pelvis I was unable to find any. I then drew all the intestines outside of the abdominal cavity but still I could find no intestine otherwise than the dilated upper portion. I then drew the stomach down into the wound to find the transverse colon and found crossing the lower border of the stomach a narrow cord about half to one-third of an inch in diameter. This represented all I could find of the large intestine, which appeared to me much too small to admit of anastomosis and at this stage also the infant's condition prevented this treatment. The intestines were replaced and a Paul's tube was tied in the opened end. The infant died some few hours later. On examining the sac afterwards it was seen that coming off from the lower part of the distended intestine in the sac was a small diverticulum which appeared to have been ligatured in the cord from its dense adhesion in this region. This could not be definitely proved as advanced inflammatory changes had already taken place in the coverings of the hernia. Prolonged from the apparently blind end of the small intestine was a small cord-like structure about two inches in length, which on further examination was found to have a narrow lumen admitting a surgical probe and ending blindly. This lumen was apparently continuous with the lumen of the small intestine.

At the necropsy the large intestine commenced just below the hepatic flexure; the transverse colon, sigmoid flexure, and rectum were all present but very shrunken, having a diameter of from one-third to half an inch and a narrow lumen. The contents were merely a little colourless mucus. In the sac of the hernia, therefore, there was the lowest coil of small intestine, from which a diverticulum arose and was probably ligatured in the cord; beyond this point the intestine which represented the cæcum and ascending colon was much contracted, and although having a lumen it was too small to permit of the onward passage of contents. The intestine ended blindly in the sac and the large intestine commenced again just below the hepatic flexure of the colon. The malformation must have arisen quite early in fœtal life, before the end of the third month. The solution of continuity in the large intestine was in all probability caused by the snaring at the umbilical ring. The intestine could not recede into the abdomen owing to the adhesion of Meckel's diverticulum to the amnion. The large intestine inside the hernial sac was not developed, probably because the vessels supplying it were also snared by the umbilical ring, and hence for functional purposes the small intestine ended blindly. The large intestine inside the abdominal cavity was in a better state of development than that in the hernial sac but still very contracted and empty owing to non-use.

CASE 2.—The patient was a male infant, four days old. Shortly after birth he commenced to vomit; this persisted and became very offensive. The abdomen was distended. Nothing had been passed per anum. When seen four days after birth the abdomen was greatly distended and coils of intestine were seen in various directions in peristalsis. The rectum was normally formed. Intestinal atresia was obviously diagnosed.

The abdomen was incised in the mid-line. At the lower end of the ileum the intestine ended blindly and was continued on as an impervious cord, about half an inch in length, into a much shrunken and contracted large intestine. The obstruction was situated about two inches above the cæcum. The intestine was drained and an anastomosis into the large intestine was proceeded with. The infant's condition became so grave that this had to be abandoned. A tube was tied into the lower end of the distended intestine. Death occurred a few hours later. No necropsy was obtained. At the operation I tried to pass a probe from the upper to the distal segment through the band of occlusion. This was impossible and so presumably a complete atresia was present. The structure of the band of connexion I am unable to say.

Congenital atresia or stenosis of the intestine, excluding the rectum, is a relatively infrequent condition. Theremin writing in 1877[1] says that in 111,401 children it was observed only twice and in St. Petersburg in 150,000 children it was seen only nine times. The atresia may be found in the duodenum, the jejuno-ileum, or the large intestine. Silbermann[2] collected 24 cases of atresia of the duodenum, and 30 cases of atresia and three of stenosis of the jejuno-ileum. Gärtner[3] found in 38 cases, 20 times occlusion of the jejuno-ileum, 16 times of the duodenum, and twice in the colon. Schlegel, quoted by Braun,[4] collected 89 cases of atresia and stenosis of the intestine and found 29 occurred in the duodenum (32·5 per cent.), 54 in the jejuno-ileum (60·6 per cent.), and six in the upper portion of the large intestine (6·6 per cent.). The condition is found most frequently, therefore, in the jejuno-ileum, a little less frequently in the duodenum, whilst the large bowel, excluding the rectum, is rarely the seat of these defects. Complete atresia is more frequently observed than mere stenosis in all situations.

Cordes[5] collected 56 cases of congenital occlusion of the duodenum and added a further observation of his own. Of the 57 cases in 48 atresia was present and in nine merely stenosis. In 16 the infants were premature. The site of the occlusion had a close relation to the orifice of the common bile-duct. It was above the orifice of the duct in 20 (immediately above in 12, above but exact location not stated in eight); below the orifice of the duct in 13 (immediately below in two, below but exact location not stated in 11); on a level with the common bile-duct in two; the common duct opened into the intermediate canal in four; atresia was near the opening of the common bile-duct in one. The common duct was not mentioned in 15 (first portion occluded in three, at the junction of the duodenum and jejunum in five, six inches from the pylorus in one, the duodenum ended blindly in two, obliteration of the lower portion in one, complete closure of the duodenum in one, and the duodenum from the pylorus to the common duct converted into a cord in one).

The most frequent condition found in the jejuno-ileum is that where there is a complete obliteration of the lumen and the proximal and distal portions of the gut end blindly. The two blind ends may be united by a band continuous with the mesentery and in a few cases in this band a very narrow lumen has been observed; also muscular tissue and intestinal glands have been demonstrated, as in a case recorded

[1] Deutsche Zeitschrift, 1877.
[2] Jahrbuch fur Kinderheilkunde, 1882.
[3] Ibid., 1883.
[4] Beitrage zur Klinischen Chirurgie, 1902.
[5] Archives of Pediatrics, 1901.

by Martens[6] This connecting band may be absent and yet the two intestinal ends may be in close apposition each provided with a mesentery, but the latter may be wanting over some portion More rarely the two intestinal ends may be separated for some distance from one another and may lie in various regions of the abdomen Hecker[7] found the proximal end of the small intestine lying in the sacral region, whilst the distal end lay under the edge of the right lobe of the liver to which it was adherent Lilienfeld[8] found the peripheral end in the cæcal region of the abdomen and the central end under the left lobe of the liver In my first case the proximal end was in the sac of an umbilical hernia and the distal end was just beneath the right lobe of the liver In some cases the intestine is surrounded by a furrow externally and projecting into the lumen is a membrane or diaphragm of mucous membrane which is perforated in the centre The bowel may be constricted and although permeable its lumen may be too small to permit of the onward passage of contents The deformity is most frequently single but may be multiple Atresia and stenosis may exist together in cases recorded by Fischer[9] and Thorel[10] where several points of obstruction existed Gartner records a similar case

Atresia of the colon is rarely seen In my case there existed an occlusion in the ascending colon Simmonds[11] describes a case of atresia of the ileum for which he performed an anastomosis between the ileum and colon At the necropsy there was found in addition atresia of the sigmoid colon A common condition is for the large intestine and small intestine below the obstruction to be extremely contracted and empty The lumen is very narrow The bowel is likened to the thickness of a slate pencil a lead pencil a quill pen, and so forth How small and apparently undeveloped it is will be quite readily seen from these similes Upon this fact in a great measure depends the prognosis In such conditions it appears hopeless to expect that this much contracted intestine can serve any function An anastomosis would therefore seem out of the question It has yet to be shown, I think whether this contracted portion of gut is capable of dilatation and can serve any purpose or whether it is really an instance of non development

Etiology.—The causes which have been assigned as etiological factors in congenital intestinal occlusion are numerous It may be definitely said that there is no common cause for this condition More frequently than not the pathology of the condition is obscure and more or less theoretical In a few cases there appeared to exist a definite etiological factor

Pearce Gould[12] reports the case of an infant three days old, admitted to the hospital with signs of intestinal obstruction He opened the abdomen in the left inguinal region and found the small intestine greatly distended a loop of this was sewed into the wound Death occurred 21 hours later At the necropsy the cæcum the lower four inches of the ileum and the first four inches of the colon were filled with a firm whitish plug of inspissated mucus of the consistence of cheese, this was firmly applied but not adherent to the mucous membrane In the colon beyond this plug were seen several masses of mill white firm mucus Below the colon and rectum were emptied and contracted There was no fault in development The plug must have been formed before the third month of fœtal life as it contained no bile pigment The plug was definitely stated to be mucus

Cirwardine[13] reports the case of an infant two days old suffering from intestinal obstruction Meckel's diverticulum was distended and formed a cyst which was produced by a volvulus of the diverticulum of some three turns A fine impervious cord connected it to the bowel below and a minute stalk which would only partially admit a bristle attached it to the distended bowel above The bowel above the obstruction was dilated, whilst the lower 12 inches of the small intestine were empty and tortuous and the colon was small and non sacculated No meconium had passed beyond the obstruction and therefore it must have existed from very early life

Craig[14] reports a case of an infant who died from intestinal obstruction when 72 hours old The obstruction was in the upper fifth of the ileum At the site of obstruction on the side of the bowel opposite the mesentery was a fibrous cord resembling in structure the great omentum about two inches long and an inch broad, the opposite end was free in the abdomen The two ends of the intestine ended blindly and were united by a band of fibrous tissue Craig suggests that the band was a portion of great omentum which had become adherent to the intestine and had dragged on the bowel and produced congestion and inflammation of the intestine and the two opposing surfaces had adhered This may be the explanation of the intestinal occlusion but it is more probable that the band was not omentum but the remains of a Meckel's diverticulum

Chiari[15] reports a case of occlusion of the small intestine 15 centimetres above the ileo cæcal valve The ends of the intestine were 4 5 centimetres apart and bound together by a sharp edge of peritoneum in the distal end was a cylindrical intussusception seen with the naked eye Braun reports the case of an obstruction about 10 centimetres above the ileo cæcal valve the intestine ended blindly The intestine above the obstruction was much dilated and below was empty and contracted and did not contain any meconium In the distal end was a necrotic portion of intestine about one centimetre long adherent to the surrounding intestinal wall This was only demonstrated by microscopical examination Braun says that without doubt it was a necrotic intestinal invagination and regards it as the origin of the atresia This author suggests that this may be a more frequent cause of intestinal atresia than is supposed if all cases were submitted to microscopical examination Chiari thought it not at all improbable that the invaginated portion of intestine may become completely absorbed and leave no trace This it is impossible to say, but it seems quite conceivable that intestinal invagination may be a frequent cause of intestinal atresia To elucidate this point a further number of microscopical examinations are necessary

Anomalies in the vascular system, embolism and thrombosis of the mesenteric vessels and compression of the intestine by an artery are all given as causes of congenital intestinal occlusion These if they occur, are very rare Jaboulay says that the arrest of development of the intestine depends upon vascular anomalies Proof of this statement is wanting Of embolism and thrombosis of the mesenteric vessels nothing is known It must be noticed that in by far the majority of cases the intestinal atresia takes place very early in fœtal life before the formation of the bile since it is most unusual to have bile in the peripheral intestinal segment How an embolism or thrombosis can occur at this period it is difficult to understand How an embolism or thrombosis can involve such a small segment of bowel it is more difficult to understand The role played by vascular anomalies embolism and thrombosis in congenital intestinal atresia is practically *nil* Fœtal endocarditis admittedly exists but the development of the heart in the recorded cases of intestinal atresia is normal Of arterial degenerations of the fœtus apart from syphilis practically nothing is known Atheroma of the aorta and pulmonary artery may with great rarity occur in antenatal life We are without a cause for embolism and thrombosis and also I think without a satisfactory demonstration of their existence they must therefore play a very limited if any part in the production of congenital intestinal atresia Gartner refers to a case of occlusion produced by an omphalo-mesenteric artery and to a case of compression of the intestine by a new growth

Fœtal peritonitis torsion of the intestine ulceration and errors of development are the frequent causes of congenital intestinal atresia set forth by most observers J Y Simpson[8] as long ago as 1838 thought that various congenital hernias were due to fœtal peritonitis, that various malformations both in the way of displacement and arrested developments in the digestive urinary and genital organs were indirectly caused by the same malady and that inflammatory action in other serous cavities might lead in the same manner to malformations among their visceral contents Silbermann and Thoremin also regard fœtal peritonitis as the cause of intestinal atresia Fiedler[1] also advocates this theory and thinks that a peritonitis developing in early fœtal life may

[6] Deutsche Zeitschrift f. Chir. 1900
[7] Inaug. Diss. Erlangen 1896
[8] Inaug. Diss. Berlin 1901
[9] Virchow's Archiv 891
[10] Inaug. Diss. Lausanne 1899
[11] Brit. Med. Jour. 1900
[12] THE LANCET May 6th 1882 p 738
[13] Brit. Med. Jour. 1897 vol ii.

entirely disappear, leaving no trace except its effects on the intestine. Fœtal peritonitis is credited with the production of other deformities—e.g., non-descent of the testicle, malformations, and displacements of the female generative organs. Fœtal ascites, which by some is regarded as a fœtal peritonitis, has been seen in association with malformation of the lower part of the large intestine and various other malformations. In the 57 cases of duodenal occlusion collected by Cordes peritonitis was present in only three, the description of which is meagre and of little value. The peritonitis must occur before the third month of fœtal life and must have constricted the gut by that time, as in the majority of cases no bile has passed into the distal segment. The cause of the peritonitis is said to be syphilis or tuberculosis. If a fœtus be affected with syphilitic peritonitis before the third month it seems most improbable that that fœtus should continue to live and at birth merely show an intestinal atresia the result of the peritonitis. Visceral changes of syphilis are entirely wanting in these cases. Fœtal tuberculosis has rarely been seen but the disease has been seen involving the peritoneum and intestines. Mauclaire[18] relates a case of a necropsy in which he found, in addition to recent peritonitis around the site of operation, old tough adhesions binding the intestinal coils to one another and to the liver. There were a complete occlusion of the small intestine at one point and also many constrictions scattered along its course. At one spot a volvulus was present. In the mesentery many glands were enlarged and the tubercle bacillus was demonstrated in them. The description given of this case and the accompanying illustration strongly suggest that the peritonitis may have caused the occlusion. But it must be remembered that a volvulus was also present and a volvulus may have caused the obstruction. Other forms of fœtal peritonitis may occur but we are ignorant of their etiology. Single atresia is more common than multiple defects and it seems almost incredible that the only effects of a fœtal peritonitis can be a constriction of one portion of gut and that it may leave no further trace, as is the actual condition observed in the majority of intestinal malformations.

The site of the occlusion has some regularity—e.g., in the duodenum or the lower part of the ileum. Why does œtal peritonitis leave its effects so frequently in such constant positions? The cases in which fœtal peritonitis has been assigned as the cause of intestinal atresia show comparatively recent peritonitis developed just before birth or possibly in some cases after birth. Druitt[19] records a case in which the evidence of peritonitis as the cause is at first sight more convincing than in some others. The jejunum and upper third of the ileum were immensely distended, dark, and vascular. The distension ceased at a tangled spot tied together by a multitude of adhesions which matted the coils of intestine to each other and to some enlarged mesenteric glands. The canal of the bowel ceased entirely at this point and besides the point of complete obstruction there were one or two places close by at which the canal was nearly but not quite obliterated. The remaining portion of the ileum and the colon were pale, small, and contracted. There were numerous adhesions, most of them of an extremely light, flocculent character between several points of intestine and the parietal peritoneum. Some of these adhesions were evidently recent. The density of the adhesions between the intestinal coils is not mentioned. The author states that there were one or two places where the canal was nearly obliterated but this was probably only by acute kinking. The peritoneal adhesions were localised to the lower ileum, the remainder of the peritoneum being free. There seems therefore very justifiable reason to doubt whether the peritonitis had anything to do with the intestinal atresia. In Carwardine's case some local peritonitis was present around the distended Meckel's diverticulum, but these adhesions were easily separated and were probably only produced shortly before or even after birth. They certainly could not have existed from the second month of fœtal life and have been the cause of the torsion of the diverticulum. Similarly, in other recorded cases the peritonitis is local, recent, away from the seat of the intestinal lesion, and the only conclusion that can be drawn is that the peritonitis had very little, if anything, to do with the malformation. It is impossible to state that peritonitis is never a cause, but it can be said that as an etiological factor it is very rare. Indirectly it may account for some cases by prolonging the time of retention of the primitive intestinal coils outside of the abdomen.

Torsion of the intestine has by many observers been regarded as a cause of intestinal atresia. Torsion of the intestine has been seen several times. Gärtner in 1883 collected 13 cases and since that time some further cases have been recorded. Volvulus is seen with occlusion and with partial occlusion, as in Carwardine's case, and with merely narrowing. In some cases the twist seems to have occurred in late fœtal life and in others it must have occurred quite early judging from the contents of the intestine below the volvulus. It seems that volvulus can account for some cases of congenital intestinal atresia, either a volvulus of the intestine coil itself or a volvulus of a diverticulum exerting strong traction on the intestine from which it is springing. It is quite possible and probable that peritonitis may have some cause in the production of the volvulus and in the persistence of it. I cannot believe that volvulus accounts for any cases unless the twisted coil or its remains can be seen. Surely it cannot completely disappear and leave no trace. It is a most unsatisfactory explanation of the cases in which the intestinal segments end blindly, either abutting on one another, separated by a centimetre or so, or widely separated, lying in quite separate regions of the abdomen. Some evidence of the volvulus ought to persist. At the most, volvulus of the intestine is only a very limited cause in the production of intestinal atresia. That it may occur in some cases is certain. But the cases are in a great minority.

Ulceration, loss of tissue, and consecutive stenosis have been given as a cause of congenital stenosis of the intestine. Marckwald[20] describes a case in which he found without doubt inflammatory lesions in the intestine and which he regards as the cause of the atresia which was also present. The intestine ended blindly; the ends were 1·5 centimetres apart. The changes which he describes in the wall of the intestine—i.e., ulceration—do not seem to be such as would be consistent with a complete disappearance of a portion of intestine. The obstruction must have existed quite early in fœtal life and the changes which he describes were more or less recent. Thorel[21] also describes a case somewhat similar in appearances and advances the loss of tissue seen in the intestinal mucosa as the cause of the atresia. The same objection applies to Thorel's as to Marckwald's case. The evidence that fœtal intestinal ulceration can result in atresia requires a considerable amount of confirmation before it can be accepted.

In favour of the theory that congenital intestinal atresia results from errors in development much may be said. Sutton[22] says that congenital obstruction and narrowing of the alimentary canal are always found in the situation of embryological events. With regard to the small intestine, the site of obstruction is found in the duodenum near the orifice of the common duct or in the lower ileum. In both these situations important embryological changes occur. From the duodenum the liver arises as an outgrowth. Very various malformations have been described in association with the growth of the liver—e.g., accessory livers, accessory pancreas, anomalies in the bile and pancreatic ducts, and also diverticula growing from the duodenum in the neighbourhood of the bile papilla. In the present state of our knowledge and in the absence of any other satisfactorily explained etiological factor it is quite justifiable to conclude that atresia of the duodenum is in some way associated with the development of the liver and the pancreas. The deformity occurs at a quite early period of fœtal life, at a time when the liver is developing before the rotation of the primitive intestinal tube. Any abnormal traction or abnormal closure in connexion with the primary hepatic outgrowth or other diverticula may result in duodenal atresia.

In the small intestine many cases of atresia can be traced to Meckel's diverticulum. This diverticulum, arising from the mid-gut, is usually attached to the lowest portion of the ileum. This depends on the greater development of the upper mid-gut than the lower, the V-shaped loop from which the greater part of the small intestine is evolved forming above the attachment of the vitelline duct. Lamb[23] records cases where the diverticulum was seen in the

18 Bulletin et Mémoire de la Société Anatomique de Paris, 1899.
19 Transactions of the Obstetrical Society, 1861.
20 Munchener Medicinische Wochenschrift, 1894.
21 Ibid., 1899.
22 International Journal of the Medical Sciences, 1889.
23 American Journal of the Medical Sciences, 1893.

jejunum and some in the ileum The variability in attachment of the diverticulum may be explained by the variability in growth of the umbilical flexure to which the diverticulum is originally attached The upper limb usually develops a portion of the duodenum, the jejunum and the greater part of the ileum, and consequently the diverticulum is situated in the lower ileum But should the lower limb of the umbilical flexure grow more luxuriantly then the diverticulum may have an abnormally high attachment to the intestinal canal Hence it is conceivable that the diverticulum may practically have an attachment to any part of the intestine which grows from the primitive mid gut By the end of the third month the vitelline duct has generally disappeared If this obliterating process exceeds the necessary requirements the bowel may be constricted or even completely obliterated Several cases are reported where immediately in relation with a diverticulum the bowel was much stenosed Cases of simple stenosis of the ileum not traceable to ulceration depend on the excessive obliteration of a Meckel s diverticulum This is the most satisfactory explanation of single cases of stenosis occurring in the small intestine and also satisfactorily accounts for complete atresia with or without a cord like band uniting the two blind ends of the intestine The time in fœtal life which it would occur—i e, before the end of the third month—would account for the non appearance of meconium in the distal segment of the bowel A Meckel s diverticulum may have another action By persisting for an abnormal length of time without the abdominal cavity retained there possibly by adhesions of the amnion undue traction might be exerted on the growing intestinal coils causing obliteration at the point of attachment as in the case recorded by Craig and referred to above A further cause from an embryological point of view is seen in the first case which I have recorded There was a complete solution of continuity here in the ascending colon just below the hepatic flexure The proximal end of the intestine lay in a congenital hernial sac and the distal end separated some distance from it in its normal anatomical position A portion of the mid gut originally without the abdominal cavity should recede during the third month when the vitelline stalk disappears and leaves the gut free to pass into the abdominal cavity The vitelline duct persisted and caused some portion of intestine to be retained outside the abdomen the walls of which gradually inclosed around it and snared it causing a complete severance

Ahlfeld[24] describes a case of a congenital umbilical hernia connected to the abdomen by a very thin pedicle The hernia contained a portion of small intestine the cæcum and part of the colon This was snared off from the rest of the intestine The lower part of the small intestine ended blindly about one centimetre from the umbilical ring and the colon in the abdomen commenced about one centimetre from the ring Laméris quoted by Braun describes a case where there was an atresia of the intestine in the sac of a congenital umbilical hernia It is not improbable that an [illegible]

[illegible] persistence of a Meckel s diverticulum which being adherent prevents the primitive intestinal coils from receding into the abdomen The abdominal walls may close round the intestine and, so to speak, cut it off At birth a congenital umbilical hernia may be present containing the snared bowel But it is quite conceivable that later after the continuity of the intestine has been interrupted the diverticulum may disappear, and the intestine then be free to pass into the abdominal cavity Such an explanation satisfactorily accounts for my case and also cases where the deformity is seen in the large intestine not associated directly with the obliteration of Meckel s diverticulum It also seems the best explanation of those cases where the two blind ends of intestine are widely separated from one another

Meckel s diverticulum may have a further action By persisting and becoming adherent to the amnion great traction may be exerted on the intestine which causes such tension of the walls and narrowing of the lumen and even obliteration resulting in a cord like remnant A similar explanation may possibly account for those rare cases of atresia of the sigmoid colon Diverticula the origin of which is entirely unknown, have been seen protruding from this portion of the colon, adhesion of these and traction may result in atresia

Summarising the etiology of this condition it may be said that most if not all malformations in the duodenum are associated in some way with the development of the large glands from this region, that many single occlusions of the small intestine are referred to Meckel s diverticulum, that snaring of intestine by the umbilical ring accounts for some cases and probably this is of more importance than has hitherto been thought, that volvulus no doubt accounts for a few cases that there is no satisfactory evidence that intestinal ulceration has anything to do with atresia that fœtal peritonitis has a very limited if any application in the cause, and that the unusual cases where multiple points of atresia or stenosis exist are very difficult of explanation and probably depend on different causes acting together which have just been mentioned

Symptoms—The symptoms of this condition are vomiting, persistent and increasing in severity, abdominal distension, visible peristalsis, nothing practically is passed per rectum the anus and rectum are well formed, rapid emaciation and exhaustion ensue the disease running to a rapidly fatal issue Vomiting generally occurs soon after birth or may be delayed to the second day In general the higher the occlusion the earlier the vomiting but this is not always the case In Cordes s analysis of 57 cases vomiting was noted in 41 and not mentioned in 16, vomiting material like meconium in 16 watery brown or yellowish vomit in five, black or coffee ground or blood in eight, nourishment in two nature of vomit not stated in ten There were meconium stools in 21, the stools were not stated in 29 there was stated to be no meconium in six The character of the vomit and stools depends on the position of the obstruction with relation to the bile duct The epigastrium may be distended The passage of a catheter into the stomach would aid the diagnosis of this condition When the obstruction is lower down the vomit becomes very offensive and practically nothing is passed per anum at the most some mucus free from bile in the majority of cases The abdomen rapidly distends particularly centrally and peristalsis may be seen The finger may be introduced into the rectum with ease and 'bulging intestinal coils felt This has often been mistaken for a high occlusion of the rectum and a perineal dissection performed A sound can be passed for some distance up the rectum An enema merely brings away some colourless mucus

Treatment—The only possible hope for an infant born with intestinal occlusion is that afforded by means of surgery This hope has up to the present time never yet been realised so far as I know This statement, of course, does not apply to malformations of the rectum Braun in 1902 collected 25 cases which had been operated upon Letoux[25] in 1903 states that in all 32 cases of operation for this condition have been recorded in the literature Since this date I have found a few isolated cases reported Probably many cases are unrecorded In every case the result has been un successful This depends in part on the tender age of the infant and in part on the difficulty of early diagnosis but [illegible] f the malformation The [illegible] tracted and shrunken it is [illegible] pable of dilatation and [illegible] ontents from the proximal to the distal [illegible]

Enterostomy is the course which has been most frequently practised This has been performed in various ways In many cases the operator suspecting a high rectal atresia has incised in the left iliac region with the idea of performing colotomy Finding only distended small intestine he has opened the loop which first comes forth regardless of its relative position to the site of obstruction In a few cases an incision has been made in the lumbar region with the idea of performing lumbar colostomy and the sr [illegible] l from here On one or two o [illegible] has been incised either primarily or [illegible] left iliac incision The median abdominal incision has also been made use of and the intestine drained from this route Some operators—Fairland[26] Lucke[27] Anders[28] Braun and Letoux—thinking a high atresia of the rectum existed endeavoured to find the proximal end by dissection from the perineum They failed

[24] Archiv fur Gynakologie, 1873

[25] Bulletin et [illegible]

[26] J [illegible]

[27] St Petersburger [illegible]

and performed abdominal enterostomy. Kermisson reached the distended small intestine by the perineal route and opened and drained it.

Entero-anastomosis has been performed at least six times. Mangoldt, quoted by Braun, operated upon an infant three days old with five points of occlusion in the ileum. The jejunum was anastomosed to the colon immediately beyond the cæcum. Franke[29] anastomosed the ileum to the ileum for an obstruction from 23 to 25 centimetres above the cæcum. Death occurred from general peritonitis, the result of leakage around the line of suture. Simmonds[30] anastomosed the ileum to the cæcum and after the operation symptoms of obstruction persisted and at the necropsy there was found in addition an atresia of the sigmoid flexure. Braun, suspecting a high rectal occlusion, endeavoured to reach the proximal end from the perineum; being unsuccessful he incised in the left iliac region and here found contracted small and large intestine. He then incised in the right iliac region and found the cæcum and lower ileum contracted. A distended coil of small intestine was seen but it was impossible to draw this into the wound and so a median abdominal incision was made. Braun found the obstruction and anastomosed the ileum to the ileum. On pressing upon the proximal end intestinal contents could not be made to pass into the distal end. He then anastomosed again more distally, still nothing would pass. At the necropsy it was found that nothing had passed into the distal contracted intestine. Wanitshek[31] for an obstruction between the ileum and the cæcum joined the ileum with what appeared to be the largest part of the large intestine. Oliver,[32] in a case where the two ends of the intestine were separated about one and a quarter inches, performed an end-to-end anastomosis. Death occurred five hours later and the necropsy showed that the intestine below the anastomosis was greatly contracted and apparently nothing had passed into it from the proximal segment. In five of these cases the patients died within a few hours of the operation. Franke's case lived three days and then succumbed from general peritonitis. I cannot find a recorded case of an operation for a duodenal occlusion. The majority of these operations were performed during the first three days of life—eight on the first or second day and 12 on the third day. The majority of cases treated by enterostomy succumbed within 24 hours. Three lived to the second day, one to the fourth, one to the fifth, and one infant lived 15 days.

Such are the statistics for the relief of congenital intestinal occlusion and it may well be asked, Is surgical interference justifiable? The failure of enterostomy is not so much the shock of the operation as the short length of intestinal tube left for the absorption of nourishment. This will in itself always render enterostomy nothing more than a palliative operation. It has been suggested that enterostomy as a palliative measure should first be performed and later under more favourable conditions the anastomosis should be proceeded with. The results of the cases submitted to enterostomy at once show the uselessness of this suggestion.

The anastomosis, the ideal operation, is attended with some considerable shock which in itself is often sufficient to prove fatal, differing from enterostomy. In addition, the distal segment of the bowel is often, nearly always, so extremely contracted that suture is very difficult, and if successful thus far in more than one case the obstruction has not been relieved, since the intestinal contents, thick, viscid, glairy meconium, cannot easily pass into this distal contracted bowel. Yet this has done so. In one case out of six the infant lived to the third day and then suddenly collapsed and died from peritonitis. The outlook in this case would have been hopeful otherwise. This case at least gives hope that the condition is not beyond the reach of surgery entirely. If only one infant can be saved something is gained. The disease is most certainly fatal if left alone. The exact abnormality cannot be foretold. Even with such slight hope the abdomen should be opened. The median incision should always be used. It is waste of time to expose from the perineum or the iliac regions. If the obstruction be in the duodenum and jaundice exists operation is useless. Otherwise gastro-enterostomy should be performed. I am not aware that this has been done but it is no more severe than intestinal anastomosis and, I think, affords a better hope of success than the latter. In duodenal occlusion the intestine is better developed than is the distal segment in an obstruction of the ileum.

In a jejuno-ileum occlusion the anastomosis should be effected as close as possible to the deformity, to leave as much small intestine as possible in the circuit. Often the obstruction is so near the colon that the ileum will have to be anastomosed to the latter. The extreme contraction of the distal segment being one of the causes of failure after this operation it has occurred to me that it might be possible to overcome this by water pressure. It seems certainly worthy of a trial. This would have an additional advantage that it would test whether or not there were a second obstruction present lower down. Before suture the distended bowel should be drained.

If multiple points of atresia be present anastomosis would generally be impossible. Occasionally it may be possible as in Mangoldt's case. Single obstruction in the large bowel, a most rare condition, would necessitate colostomy. If anastomosis be impossible on account of the infant's condition or from the conditions of the occlusion temporary rel[illegible] enterostomy.

[illegible] so far to save these infants have be[illegible] too much to hope that with an early [illegible] in good condition otherwise, and a [illegible] gastro-enterostomy or ileo-anastomosis [illegible] here as it is in so many acquired conditions of intestinal obstruction.

Harley-street, W.

29 [illegible] irurgie, 1898, 900.

30 Journal of the American Medical Association, 1901.

THE INTRAVENOUS INJECTION OF ANTITOXIN IN DIPHTHERIA.

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Two years ago Dr. D. L. Cairns published a report on the above subject.[1] He claimed increased efficacy for antitoxin when given intravenously, stating in particular that there resulted a strikingly rapid decline in the toxæmia, quick subsidence of glandular enlargement, and in pneumonic cases a marked diminution of the accompanying restlessness. In 50 cases of diphtheria, 20 of which were treated by this method, there were three deaths, a mortality of only 6 per cent. Of these 17 were tracheotomy cases with one death, a remarkably low mortality (5·8 per cent.). On the publication of Dr. Cairns's results we commenced the administration of serum by the intravenous method in grave cases. In 1903 seven patients (Series A) out of a total of 334 were so treated, the results were so equivocal that during the latter half of the year the method was discontinued. In the first nine months of the present year, however, it has been given a further trial, 38 cases being selected out of 246 (Series B).

SERIES A.—SEVEN CASES WITH FIVE DEATHS.

A brief report of these cases may be given.

CASE 1.—A female patient, aged 11 years, was admitted on Jan. 24th, at 12.15 P.M., on what was stated to be the second day of illness. There was thick membrane over both sides of the fauces and half of the soft palate. Both sides of the neck were greatly swollen. There was profuse discharge from the nose. The skin was pale. The temperature was 101° F.; the pulse was 128 and of low tension. At 4.15 P.M. 30,000 units of antitoxin (Serum A) were given intravenously. At 5.30 P.M. the patient had a rigor and the temperature rose to 105·2°. At 6.20 it was 106·2°, after which it gradually fell to 101·2°. On the 25th 26,000 units (Serum A) were given intravenously. There was no rigor or rise of temperature. On the 26th the local lesion showed signs of retrogression. On the 27th there was a decided decrease in the membrane and the nasal discharge was much less. On the 31st severe vomiting commenced. The heart was dilated and the pulse was soft and slow (60 per minute).

1 THE LANCET, Dec. 20th, 1902, p. 1685.

The urine was scanty and contained a large amount of albumin. The voice was very nasal in tone. From this condition a slow recovery was made, the patient being ultimately discharged in the fifteenth week of the attack.

CASE 2.—A male patient, aged three years, was admitted at 9 P.M. on Jan. 24th, the sixth day of illness. On admission there was membrane all over both sides of the fauces and on the uvula. There were profuse nasal discharge and marked swelling of the neck. The pulse was 120 and of low tension. 30,000 units of antitoxin (Serum A) were administered intravenously. On the 25th the membrane had almost separated, the glandular swelling was much less, and the nasal discharge was reduced. The pulse had fallen to 84. On the 26th the pulse was 60; the heart-beats had a marked gallop rhythm due to a reduplicated second sound. The urine contained a large amount of albumin. The patient was very drowsy. On the 27th there was vomiting and the drowsy state continued; the urine was scanty. The patient died on the 28th.

CASE 3.—A male patient, aged four years, was admitted on Jan. 26th at 12.45 P.M. He was in the fourth day of the attack. There was extensive membrane on both sides of the fauces and on the uvula, with extreme swelling of the neck and profuse nasal discharge. There were pallor and some cyanosis. The temperature was 103·8° F.; the pulse was 144 and very feeble. At 2 P.M. 40,000 units of antitoxin (Serum A) were injected intravenously. At 4.15 P.M. the temperature had risen to 105·6° and there were increased cyanosis and collapse. Death occurred at 7.25 P.M., the temperature then being 103·6°.

CASE 4.—A female patient, aged four years, was admitted on July 29th at 2 P.M., the illness being then in the fourth day. There was extensive membrane all over both sides of the fauces, on the uvula, and on one-half of the soft palate. There was not much swelling of the neck. The general condition was good; the pulse was 144. The urine contained a trace of albumin. At 6.40 P.M. antitoxin was given intravenously, the dose being 18,000 units (Serum B). On the 30th the membrane was still very extensive. A subcutaneous dose of 12,000 units of antitoxin was given. On the 31st the membrane was quite loose. On August 1st the membrane had separated, leaving the throat very dirty and sloughy. On the 3rd vomiting commenced and the child sank rapidly. Death occurred on the following day at 6.15 A.M.

CASE 5.—A male patient, aged four years, was admitted on July 23rd at 2.30 P.M. on the third day of illness. There was membrane all over both tonsils with considerable œdema of the fauces and profuse nasal discharge. The pulse was 128; the urine was normal. An intravenous injection of 12,000 units of antitoxin (Serum B) was given. On the 24th there was slight epistaxis. A subcutaneous injection of 12,000 units of antitoxin was given. The further progress of the case was very slow, the septic element being prominent with profuse rhinorrhœa and ulceration of the fauces. On August 9th the patient had profuse hæmorrhage from the pharynx and died shortly afterwards.

CASE 6.—A female patient, aged four years, was admitted at 3.20 P.M. on July 25th, which was stated to be the third day of illness. There were a great deal of membrane all over both sides of the fauces and much swelling of the neck. Under ether 12,000 units of antitoxin (Serum B) were given intravenously and 22,000 units subcutaneously. Death occurred at 10.30 P.M.

CASE 7.—A male patient, five years of age, was admitted at 5.30 P.M. on July 17th, the third day of illness. Both tonsils were covered with membrane. There were laryngeal cough, stridor, and aphonia, but no recession or definite dyspnœa. The pulse was 100. Under chloroform 12,000 units of antitoxin (S[illegible] 9.45 P.M. At 11 P.[illegible] the temperature, [illegible] after which it gradually fell. The urine was normal. On the 18th a subcutaneous dose of 16,000 units (Serum A) was given. The case followed a usual course. The patient was discharged in the sixth week.

It will be observed that two brands of serum (A and B) were employed. Serum A was previously in use for hypodermic injection and, when given intravenously, in three cases out of four—viz., Cases 1, 3, and 7—it caused within a short time a varying degree of chill, pyrexia, and circulatory depression. With neither serum was there any aggravation of the rash or of other later effects. Though Case 1 was extremely grave the age of the patient made her recovery less remarkable. Cases 2 and 4 ran an ordinary course to a fatal issue and Case 7 to a favourable one. In Case 3 the outlook from the time of admission was hopeless. The child in Case 6 lived only seven hours after admission, but we have thought it advisable to include it in the series. In Case 5 there was a large septic element, so that marked benefit was hardly to be expected. On the whole there was no evidence that the serum was more effective than when given subcutaneously.

SERIES B.—38 CASES WITH THREE DEATHS.

The absence of disturbance following the injection of Serum B led to its exclusive use during 1904 in a second series of cases. No useful purpose would be served by presenting clinical reports of all these cases. They are primarily grouped as naso-pharyngeal, pharyngeal, and laryngeal. In the first group there are 14 cases with no deaths. In five cases intravenous injections only were used, in six cases relatively small supplementary doses were given by the subcutaneous method, in two cases both methods were equally employed, and in one case the greater part of the antitoxin was injected subcutaneously. The following case is taken from the group.

CASE 10.—A male [illegible] on Feb. 9th, the fourt[illegible] on the whole of both s[illegible] on to the palate, and [illegible] the tonsils; there was profuse nasal discharge and the glands of the neck were considerably swollen. The pulse was 120 and of low tension. The urine was normal. At 4 P.M. antitoxin was given intravenously, the dose being 20,000 units (Serum B). On the following morning a further dose of 20,000 units was administered by the same method and at night the membrane had commenced to separate, but there was still profuse discharge from the nose. On the 13th the fauces were noted to be quite clear. The further progress of the case was without special features. A serum rash occurred at the end of the first week; it was not accompanied by other symptoms. Paralysis developed in the sixth week but was not severe. The child left the hospital in the tenth week.

Of pure pharyngeal cases there were 12 with one death. The administration of antitoxin was solely intravenous in two cases, mainly intravenous in five, about equally intravenous and subcutaneous in two, and chiefly subcutaneous in three. A single case only need be quoted here.

CASE 23.—A female patient, aged six years, was admitted at 9.45 P.M. on what was stated to be the second day of the attack. There was extensive membrane thickly covering both tonsils and involving the greater part of the soft palate, on the right side. The neck on the right side was greatly swollen. There was no nasal discharge. The pulse was 144; the urine was normal. At 11.30 P.M. a dose of 20,000 units of antitoxin (Serum B) was given intravenously. On the following day [illegible] a considerable [illegible] covered the u[illegible] A second dose of 20,000 units of antitoxin was given intravenously at 2 P.M. There had been some vomiting and the general condition was serious with a tendency to failure of the circulation. On the 29th the membrane was no longer spreading but retrogression was not evident. Vomiting continued and the patient was fed by the rectum. On the 30th the neck was much less swollen. The general condition was better. On April 1st the general improvement was marked and vomiting had ceased. The case then ran an ordinary course. There was slight paralysis in the sixth week. The child was discharged in the tenth week.

The laryngeal cases fall into three groups—those not requiring operation, those intubated, and those in which tracheotomy was performed. In the first group there are two ordinary cases, both ending in recovery. One was treated wholly and the other chiefly by the intravenous method. In a third case the lesion was mainly pharyngeal and nasal but there was slight laryngeal involvement; it proved fatal and is quoted later. Six cases required intubation only and all the patients recovered. In four cases the treatment was purely intravenous, in one mainly so; in the remaining case an equal subcutaneous dose was given. One case may be detailed.

CASE 38.—A female patient, aged four years, was admitted at 12.50 P.M. on May 30th, the seventh day of illness. There were stridor, recession, and cyanosis. Intubation was immediately performed and gave complete relief.

There were patches of membrane on the tonsils. The pulse was 112 after the child had settled down. The urine contained a trace of albumin. At 2.30 P.M. a dose of 20,000 units of antitoxin (Serum B) was given intravenously. At 10.30 P.M. the tube became blocked; it was pulled out and replaced. At midnight 20,000 units were injected intravenously. On the 31st the tube was twice removed and replaced. On June 2nd the tube was dispensed with. The progress of the case was then uneventful. Early in the second week there was a serum rash with slight pyrexia. The patient was discharged in the sixth week.

Tracheotomy was performed in three cases with one death. In one all the antitoxin and in a second half of it was given intravenously; in the third the intravenous dose was subsidiary. The history of the first of these is as follows.

CASE 43.—A female patient, aged four years, was admitted at 10.45 P.M. on June 17th, the fifth day of the disease. There was membrane in patches on both tonsils, which were very large. There was profuse nasal discharge. The neck was moderately swollen. The cough was laryngeal. The general condition was unfavourable, the child being ill-nourished. The pulse was quick and feeble. A trace of albumin was found in the urine. A dose of 18,000 units of antitoxin (Serum B) was given intravenously at 11.50 P.M. By 7.30 A.M. on the 18th the laryngeal obstruction had considerably increased; at 9.30 A.M. intubation was performed and 20,000 units of antitoxin were injected intravenously. The child became pale and cyanosed towards the end of the injection but she quickly recovered when put to bed. At 11.30 P.M. tracheotomy was performed as the great enlargement of the tonsils and the nasal obstruction prevented the intubation from relieving completely. On the 20th the tube was removed. The further course of the case showed no special features. The patient was discharged at the end of the seventh week.

The fatal cases in Series B are all of sufficient interest to be reported.

CASE 25.—A male patient, aged seven years, was admitted at 2 P.M. on March 30th. The tonsils were very big and covered with rather thin membrane. The glands on both sides of the neck were enlarged. Somnoform was employed as a general anæsthetic when the intravenous injection was given. It was taken very badly, asphyxia threatened owing to pharyngeal obstruction, and tracheotomy had to be performed. The injection was thus interrupted, only about 4000 units having been given. The remainder (24,000 units) was injected subcutaneously. On the 31st the neck was very greatly swollen on both sides. The membrane was thick and much increased. The general condition of the patient was very bad. At 2 P.M., under chloroform, 30,000 units of antitoxin were given intravenously, followed by 20,000 units by the same method at 5 P.M. The patient continued to lose ground and died on the following day.

CASE 34.—A female patient, aged three years, was admitted at 7.15 P.M. on Sept. 8th, the eighth day of illness. There was thick membrane over the whole of the fauces on both sides. There were some nasal discharge and enlargement of the glands on the left side of the neck. There were laryngeal cough and slight stridor but no marked obstruction. The general condition was bad, the pulse was 132 and of low tension, and the heart was slightly dilated. A dose of 20,000 units of antitoxin was given intravenously at 9.30 P.M. On the 9th the urine was scanty and contained much albumin; it became almost solid on boiling. It had also the green tint associated with carboluria.[2] At 9.30 A.M. 23,000 units were injected intravenously. By evening the membrane appeared to be separating. On the 10th it was coming away but the patient's general condition was not improved and there was some vomiting. More urine, however, was being passed. During the next few days there was gradual loss of ground with increased vomiting. No urine was passed in the last 36 hours. Death occurred on the 15th.

CASE 44.—A female patient, aged two years, was admitted on April 1st at 8.10 P.M. The illness was stated to be of two days' duration. There was very extensive membrane over the whole of the fauces on both sides, over the whole of the uvula, and over a part of the palate. The glands were moderately enlarged and there was some nasal discharge. There were slight laryngeal stridor and recession. The pulse was 120 and feeble. On the night of admission 20,000 units of antitoxin were given intravenously. At 6 A.M. on the 2nd there was rapidly increasing obstruction with cyanosis. Tracheotomy was performed and gave complete relief. A dose of 20,000 units of antitoxin was injected subcutaneously. During the next two days the tube was frequently blocked with thick, dry mucus and pus and the child died from exhaustion and toxæmia at 7 A.M. on the 5th.

[2] The patient had not worn a carbolic cap since admission to hospital and there was no history of carbolic acid having been used in the treatment of the sore-throat; hence the question arose whether the condition of the urine was due to the antiseptic in the serum.

CONCLUSIONS.

In attempting to estimate the beneficial effect of antitoxin given intravenously those cases must be discounted in which a marked improvement follows intubation or tracheotomy, since this may be due mainly, or entirely, to relief of the obstruction. Nevertheless, it will be noted that of nine cases operated on only one died, and this must be regarded as a low mortality. Even in cases other than laryngeal it seems to us very difficult, if not impossible, to say of any individual patient that a better result was obtained than might have followed subcutaneous injection. However, taking Series B (from which deaths occurring within 24 hours are not excluded) as a whole there was a fatality of 3 in 38 selected severe cases. This result seems to be in favour of the intravenous method. At the same time, although many of the cases treated were undoubtedly very severe, there has been a general fall in the fatality of diphtheria in the district and this leaves room for speculation as to whether the subcutaneous method might not have yielded better results than in the past.

THE

PARASITES OF SMALL-POX, VACCINIA, AND VARICELLA.[1]

BY W. E. DE KORTÉ, M.B. LOND.

(From the Bacteriological Laboratory, King's College, London.)

IN attempting to ascertain the cause of amaas or Kaffir milk-pox[2] it was hoped that if the morbific agent of that disease could be established light might be thrown on the cause of the analogous eruptive fever of small-pox. But all attempts to separate a specific organism for amaas proved as fruitless as have hitherto been all efforts to separate the agent of variola. That the specific cause or causes of variola, vaccinia, and amaas are in their respective lymphs is manifest. How, then, can the fact that so many capable observers have failed to detect the contagium in the vesicular contents of those diseases be accounted for? Three possible explanations suggest themselves in this connexion. First, the organism may from the smallness of its dimensions escape detection. Chauveau[3] in his original investigation on calf lymph clearly proves that the contagium of vaccinia is due to visible particles and that the elimination of these particles removes the effectiveness of vaccine lymph. The assumption that the cause of vaccinia is microscopically invisible is therefore not tenable. Secondly, the failure to recognise the germ may arise from the lack of a staining reaction which would serve to differentiate the pathogenic organism of variola or vaccinia from the débris present along with the organism in the pock. A third cause for the want of success in demonstrating the causal agent of variola or vaccinia by the methods usually adopted may be that, on account of its fragile nature, the ordinary methods of staining and fixing invariably lead to its destruction. Fortunately this third hypothesis is one which could easily be tested and its disregard is, as I hope to prove, the reason why the arduous labours of many investigators have failed to bring to light the contagium vivum of variola and vaccinia.

With the object of testing this view of the case a hanging-drop preparation was made of amaas lymph which had been stored in a capillary tube for six months, no other manipulation beyond that of allowing the lymph to gravitate out of the tube on to the cover-slip being employed. On examination this specimen was seen to contain a large number of circular elements, a few of them showing a

[1] As demonstrated before the Pathological Society of London on Nov. 15th, 1904.

[2] Vide THE LANCET, May 7th, 1904, p. 1273.

[3] Comptes Rendus de l'Académie des Sciences, 1868, vol. lxvi., pp. 289-93 and 317-22.

rounded nucleus, and including numbers of highly refractile granules in their interior. A number of these bodies were next seen to rupture and to disappear from view, a mass of granular detritus replacing them. This disruption, as was subsequently discovered, was due to desiccation, an agency infallibly destructive to this cellular element. The fact that these bodies had survived for six months in a capillary tube renders the possibility of their being leucocytes improbable (leucocytes in human blister fluid disappear even though kept at the temperature of the blood after 14 days), nor were they ordinary pus corpuscles, for in whatsoever manner fixation was attempted, whether by heat, alcohol and ether, or osmic acid, their destruction always resulted. Through the courtesy of Mr. E. C. Greenwood, public vaccinator for Marylebone, some human vaccine lymph was collected in capillary tubes on the ninth day of the disease. Put up as a hanging drop, with the same avoidance of manipulation as in the case of the amaas matter, this lymph also displayed a considerable number of unicellular globes with refractile contents. On the warm stage at 98° F. these bodies evinced considerable motility, the movements being so rapid at times that the alterations of shape could not be depicted. To make sure of encountering these bodies human vaccine lymph must be gathered on the eighth or ninth day of the eruption, at any rate not later than the ninth day, and should be examined within 24 hours of its collection, for it has been found that these cells disappear from the lymph spontaneously on or about the tenth day, whether situated in the vaccinia vesicle or stored in a capillary tube.

Leucocytes in human blister fluid kept at the temperature of the body may remain intact for five days or longer. For these reasons I consider these bodies to be protozoan parasites, though to what class of protozoa they belong I cannot say, but they are clearly not bacteria. Further evidence of their protozoan nature will be submitted later. The parasite is found in secondary vaccination as well as primary cases, though more abundantly in the latter. As there are comparatively few protozoa present in any given specimen of human vaccine lymph, it is advisable to centrifugalise the capillary tube containing it, and thus concentrate the parasites prior to examining the specimen. Should the drop exuded from the capillary tube be too deep it may be spread with the edge of a small bit of paper after the manner of a blood film, but owing to the extreme delicacy of the organism great care should be exercised to avoid its rupture by pressure or by desiccation. Should, however, variolous matter be available, the protozoon will be found in extraordinary numbers in the lymph from a pock on the fifth day of the eruption. Owing to the want of opportunity it has not been decided at what period the fully grown parasite makes its appearance in the pock.

From variolous matter stored in a capillary tube and free from any contaminating organism the protozoon can be regained six months after its collection and probably longer. To observe the parasite in glycerinated calf lymph—and all remarks refer to the glycerinated product—it is advisable to obtain fresh material, the fresher the better. A drop is allowed to exude on to a cover-slip from the capillary tube and then the drop is carefully spread with the edge of another cover-slip. By practice a certain thickness of smear will be found to yield the best results as to the number and visibility of the protozoon and also numerous refractile granules which I regard as its spores, both being present in large numbers, just in proportion to the virulence of the lymph; better results are obtained by suspending a small quantity of the lymph in normal saline solution.

The protozoon of variola and vaccinia.—For descriptive purposes I propose the temporary name of "amœba variolæ vel vaccinia" for this protozoon. The fully developed parasite is an amœboid organism and measures about $\frac{1}{2000}$th of an inch and has for the most part an oblate spheroidal shape, but encysted forms are found in variolous matter and calf lymph which are four or five times as large as this. The parasite consists essentially of cytoplasm, which in the encysted form is inclosed in a well-marked cell wall, and of a rounded or ovoid nucleus apparently having a definite membrane, and this nucleus can be seen to possess a circular nucleolus. The protoplasm of the cell is finely granular and

[illegible] greenish particles [illegible] ism is divided into [illegible] being best seen [illegible] s cannot often be [illegible] thus hidden by the numerous granules or spores contained in the cytoplasm. The spores give the amœba its characteristic appearance. It is difficult to be sure of the shape of the spore; in its earliest stage it would seem to be somewhat pyriform in outline, the thin end being probably continued into a flagellum, for the spore is exceedingly active immediately after its escape from the parent cell; its movement ceases at the temperature of the air but recommences at blood heat. There are no vacuoles in the cytoplasm. No multiplication has as yet been seen to occur by direct division of the amœba nor has any phenomenon, beyond the embracing of one amœba by another, which could be interpreted as a sexual act, been observed.

The most characteristic feature of the amœba is its motility and on the warm stage it is constantly altering its contour. In the case of variola no definite pseudopodia have been seen. In glycerinated calf lymph the glycerine probably inhibits the movement of the parasite as well as that of the spores. M. Calmette,[4] in speaking of fresh calf lymph, remarks that these refractile grains, which he looks upon as the virulent element of vaccine, are mobile, but that in glycerinated vaccine pulp the granules are larger and immobile. The amœbæ found in human vaccine lymph fluid are exceedingly lively, numerous pseudopodia being continually extruded and retracted. All movements of these bodies cease at the temperature of the air and to see them blood heat must be maintained. As I hope to publish shortly a paper on a method of cultivating the organisms of small-pox and vaccinia *in vitro* a more detailed account of their life-history is reserved for a future occasion.

Variolous matter contains a large number of amœbæ but relatively few extracellular spores. The amœbæ alter their contour on a warm stage but there is no well-marked pseudopodium formation. The spores are motile when outside the parasites and are very refractile. There are also present large encysted parasites with a definite cell wall possessing a large nucleus with a definite nucleolus. The encysted parasite can be found in lymph which has been stored for a month or more. The amœbæ persist in variolous matter for many months. Absolutely fresh variolous matter can be fixed by immersion for 15 minutes in equal parts of alcohol (Spiritus Rectificatus) and ether, and can then be stained with Löffler's methylene blue; the parasite takes up the dye irregularly and *the nucleus not at all.* Suspended in a normal saline solution to which a trace of eosine has been added, the organism is found not to take up the dye. After fixing with a saturated aqueous solution of perchloride of mercury the spores can be stained with aniline gentian violet in 30 minutes but lose the dye on completing Gram's method.

Human vaccine lymph.—From the few opportunities afforded for examining this substance it cannot be stated at what date in the evolution of the disease the parasite makes its appearance but it is conjectured that the height of the inflammatory process, the eighth or ninth day, is coincident with the presence of the maximum number of amœbæ. It has been stated before that the best day for collecting human vaccine lymph for the purpose of seeing the organism is the ninth day. It has been found that in lymph gathered on the tenth day the minute motile spores are very abundant but either none at all or only a very few amœbæ are to be seen. On the eighth day of vaccination young parasites are to be found. This organism is very delicate and thus far success has not attended its fixation. The spore, which is exceedingly small, is actively motile for a few hours after its removal from the vaccine vesicle. It can be fixed with equal parts of alcohol and ether and stained with aniline gentian violet in half an hour. It is advisable to employ a $\frac{1}{12}$th inch objective to see these small elements and to use artificial light and carefully regulated illumination. The amœba as found in the vesicle of a vaccinated monkey seems to be a more hardy organism, since it can be found as late as the thirteenth day, is easily fixed with alcohol and ether, and stains well with methylene blue; whether the nucleus stains or not has not been decided. The number of amœbæ present in such lymph is also much greater than is found in human vaccine. From the foregoing it will appear that human vaccine lymph differs from variolous matter and calf lymph in the relative paucity of amœbæ in the former compared with the latter, in the spontaneous disappearance of the amœbæ from human vaccine while these bodies

[4] Annales de l'Institut Pasteur. No. 3, March 25th, 1901, p. 166.

persist for long periods in variolous and calf lymphs, and in the much smaller size of the human vaccine spore.

Glycerinated calf lymph, especially when fresh and virulent, contains an enormous number of spores and amœbæ of all sizes; both are for the most part immobile, the movement being probably inhibited by the presence of the glycerine, but under certain conditions both these elements show slow though distinct motion. The organism is comparatively hardy, persists for many months in capillary tube specimens, and contains large encysted forms, especially when a month or two old; in fact, the amœba shows a strong tendency to encapsulation. A nucleus cannot usually be made out in the fresh state, but if stained after fixing for a few moments with the fumes of a 2 per cent. solution of osmic acid, with aqueous safranin, or, still better, *in vivo* in a normal saline solution tinted with safranin, the nucleus shows up plainly, especially after 24 hours. From the irregular manner in which different amœbæ take up the dye the process can hardly be considered as a true staining one—e.g., a considerable number of the smaller forms do not stain at all, while the larger bodies are sometimes dyed quite deeply.

The following cytological method of staining calf lymph shows up the organism distinctly; the readiness with which any epithelial derivatives present in the lymph take up the brown colour throws the amœbæ into strong relief. A capillary tube of calf lymph is emptied of half its contents, then the tube is filled with a weak solution of Bismarck brown in salt solution, and the lymph and the solution are caused to mix in a centrifugal machine. In a few minutes the specimen will be ready and can be mounted as a hanging drop preparation or more permanently in a shallow cell; this serves to avoid the pressure of the cover-slip which would rupture the ectosarc of the amœba.

In varicella lymph I have also detected bodies similar in general characters to those of variola and vaccinia. The protozoon of this disease is present in the vesicular contents of the pock on the first day of the eruption and can also be found on the third day. Owing to the scantiness of the material at command nothing definite can be stated as to whether the parasite persists in stored lymph at the temperature of the air, as in variola, or whether it disappears spontaneously from the vesicular contents, like the protozoon of human vaccine lymph. The amœba is a spheroidal body about $\frac{1}{2000}$th of an inch in diameter, consisting of cytoplasm and a large, clear, circular nuclear body. The cytoplasm is finely granular and contains a number of coarser refractile granules, probably spores. This protozoon has one or two large nuclei, which, as in the similar organisms of variola and vaccinia, are only occasionally seen and that only when the organism is at rest. There are no nucleoli or vacuoles to be discerned. On the warm stage the organism assumes a variety of shapes. The nucleus if seen becomes lost; the protoplasm appears to swell up and to stream about in a very active manner. The spongioplasm and coarser granules become aggregated at certain spots, leaving spaces of clear hyaloplasm. The spores often show individual intracellular activity. The streaming protoplasm is extruded in all directions, either as blunt pseudopodia, but more often as greenish sharp thorn-like processes. If the temperature is reduced the amœba may or may not return to its former resting shape, when it is for the most part circular in outline, with its granules evenly distributed in its substance, and any distinction between ectoplasm and endoplasm evinced on the warm stage is lost. The parasite can be fixed in a certain number of instances with equal parts of alcohol and ether. Only the very gentlest manipulation must be used in spreading the lymph, as the amœba is very easily destroyed. Fixed thus for 15 minutes and stained for ten minutes in Löffler's methylene blue, the nucleus or nuclei are found to stain very deeply, while the cytoplasm takes up the colour feebly. In this respect the organism differs materially from the amœba variolæ, in which, as already pointed out, the nucleus does not stain. It will be seen from this description how very unlike a leucocyte this body is; furthermore, in stained sections of the vesicle of varicella no leucocytes are to be found in the neighbourhood of the vesicle at this early stage. The organisms detailed in the foregoing descriptions are quite easy of demonstration and anyone following the directions given will have no difficulty in seeing them. From the above description of the parasites of variola and vaccinia it will be seen that they correspond closely with the organisms described by Funck under the name "sporidium vaccinale."[5]

For the assistance given to me in various ways I would like to tender my cordial thanks, in addition to those already mentioned, to Dr. H. W. Willson, Dr. John McFadyean, Dr. W. J. R Simpson, Mr. A. Wynter Blyth, Dr. T. F. Ricketts, Dr. J. Massey of Graaff Reinet, Cape Colony, and to Dr. R. T. Hewlett, whose helpful suggestions and constructive criticism have been of the very greatest assistance to me.

[5] Brit. Med. Jour., Feb. 23rd, 1901.

SOME OBSERVATIONS ON CONVULSIONS IN CHILDREN AND THEIR RELATION TO EPILEPSY.

BY R. O. MOON, M.D. OXON., M.R.C.P. LOND.

INFANTILE convulsions are a well-worn field and it is only the practical importance of the subject that leads me to contribute such facts as I have been able to find emerging from the observation of some hundred cases which, owing to the kindness of Dr. F. J. Poynton, I have been able to make during the past two years in his out-patient clinic at the Hospital for Sick Children, Great Ormond-street. These observations being entirely clinical are somewhat fragmentary and the difficulty in many instances of following up out-patients continuously makes them less detailed and precise than could be wished. To those who are not in the habit of seeing much of children convulsions are apt to suggest one of three things: (1) tuberculous meningitis; (2) teething convulsions; and (3) epilepsy. But a little experience shows that convulsions in children have a very wide range. It is impossible therefore in this paper to deal with the convulsions that arise from such gross lesions of the brain as meningitis, tumours, &c., or from toxic conditions such as uræmia. I have also excluded cases with obvious symptoms of cerebral diplegia and confined myself to the consideration only of those convulsions which are apparently idiopathic and those which, seeming to arise from some reflex cause, are regarded in many text-books as infantile convulsions proper, but the term eclampsia seems preferable for them.

Etiology.—To take, first, the remote or predisposing causes of infantile convulsions it appears that heredity and alcoholic habits in the parents are the most prominent. All writers on this subject attest the importance of heredity and in at least half of my cases there was a history of epilepsy, or insanity, or convulsions in childhood in one or both of the parents or grandparents. Alcoholism in the parents was also an important factor, as a quarter of these cases gave a history of alcoholic excess in one or other of the parents, sometimes in both. It would perhaps be not unfair to assume that there were others who may have been prevented by a sense of shame from making a truthful confession, so that probably the proportion should be larger. With regard to more immediate or exciting causes I have been much impressed by the fact that in half the cases there seemed to be no cause at all, for the children were to all appearance perfectly well prior to the onset of the first fit, which occurred quite suddenly as a bolt from the blue. In the other cases, however, the first fit was found to be associated with the following conditions: rickets, teething, specific fevers, traumatism, digestive disturbances, emotional shock, or indefinite illness.

1. *Rickets.*—Rickets has been found to be present in 11 cases and of these half had a hereditary history which, in view of the importance of heredity as an etiological factor, somewhat discounts the significance of rickets as a cause.

2. *Teething.*—Ten cases have had this association. One naturally hesitates, however, to ascribe so pathological a phenomenon as a convulsion to such a physiological process as dentition and would feel disposed to regard the relationship as accidental. Such facts as we have do not point definitely in either direction, for while, on the one hand, the fits did not in any of the cases cease with the completion of dentition, on the other hand, in one case the association was particularly close, for not only did the child first have convulsions when cutting his incisors but they

recurred regularly with the succeeding teeth and also with the second dentition.

3. *Specific fevers.*—Five cases appeared in this connexion for the first time. Two occurred prior to the onset of measles, one immediately following measles, and two in the course of pertussis. In the text-books on children convulsions and rigors are often spoken of as though they were interchangeable terms. We have not found a convulsion at all common prior to the onset of a specific fever and Baldwin[1] concludes from the study of 130 cases of acute febrile disturbances in children, the majority of which might have been accompanied by rigors in adults, that convulsions very rarely take their place even in infants. Moreover, it is doubtful whether pathology admits of a convulsion being looked upon as the counterpart of a rigor. When such a convulsion does occur it is not in my experience an isolated phenomenon, but it is quite liable to recur after the child has recovered his health and strength and two of these cases subsequently became subject to frequent attacks of *petit mal* and one of *grand mal*.

4. *Traumatism.*—Of seven cases showing this association all became epileptic. The following are instances.

CASE 1.—A child had a fall at the age of five and a half years, was taken home unconscious, and two months later began to have fits for the first time. The child became very irritable and passionate after the fits had begun, having previously been very good-tempered. In this case there was no hereditary taint or history of alcohol in the parents.

CASE 2.—A boy, at the age of ten years, was shaken by a woman and thrown down so that he knocked his head against a stone; shortly after he began to have nocturnal fits frequently. He had also become very irritable and quite different in character from what he had been prior to the fits. There was no history of heredity or alcoholism in the parents.

5. *Digestive disturbances.*—Only six cases showed this association, as when carefully investigated it was clear in many instances that the convulsion bore no true relation to the digestive disturbance. The following, however, are striking instances.

CASE 1.—A child at the age of four years had a fit for the first time after having eaten an orange, skin and all. Here, however, there was a history of fits in the parents and the child was mentally deficient prior to the fit.

CASE 2.—A boy, aged seven years, went to an evening party, had a heavy supper, and then sat in a hot room with his back to the fire; that evening after going to bed he had a fit for the first time. He has never had one since.

6. *Emotional shock.*—A boy, aged ten years, while passing an empty house in the dark saw somebody jump out on him suddenly. Soon after he began to have frequent *petit mal* attacks. Not till a year later did he have an attack of *grand mal*. There was no history of heredity or alcoholism in the parents.

7. *Indefinite illness.*—This class consists of those who prior to the first fit were ailing and delicate. There were four cases which developed convulsions in these circumstances. In each case the initial convulsion was followed later by an obvious condition of epilepsy.

8. In five cases the fits have commenced at birth, but in these instances it has been impossible to eliminate the influence of traumatism at parturition. They all became definitely epileptic. Of other supposed reflex causes of convulsions, such as worms, we have met with no examples in this series of cases.

Diagnosis.—How is i[illegible] whether a convulsion is [illegible] fit? All convulsions in [illegible] No one being summoned to the bedside of a child in convulsions could at once say whether they were due to idiopathic epilepsy or eclampsia. Such attempts at distinction between the two as have been made do not seem very convincing; thus it has been said that the epileptic paroxysm is generally short, whereas simple convulsions may last for hours. Dr. Eustace Smith tells us that "if the attack lasts for an hour or more without intermission, we may conclude that the attack is eclamptic; epileptic seizures rarely exceed ten minutes." Also, "if there is high fever the disease is probably not epilepsy." A more general statement is "the older the child at the onset of the convulsions, the more likely are they to be epileptic; within the first year epileptic seizures are rare." Such criteria are so uncertain that in a rough practical way the difference between the two has been decided by reference to their supposed etiology.

When there are some definite morbid or unusual conditions associated with the initial convulsions then they are regarded as eclamptic, and only when they occur without any such associations are they considered to be epileptic. It is further assumed that in the case of eclampsia the convulsions will cease on the disappearance of the morbid condition in association with which they first arose. Such distinctions have not been borne out by this series of cases, for there were many cases in which the convulsions, though they arose in the first instance in association with rickets, specific fevers, teething, traumatism, or digestive disturbances, have not ceased with the disappearance of their supposed cause, nor has their effect upon the mental and moral condition of the child been materially different from that of ordinary epileptic attacks. To give a few instances.

CASE 1.—A boy, aged seven years, had the first convulsion at the onset of measles when two and a half years old and two more during the course of that disease. A few months later he had another fit and since then for the last four and a half years has had attacks of *petit mal*, averaging one per diem. The child is very irritable and restless.

CASE 2.—This patient was a boy, aged six years. The first fit occurred in association with rickets at the age of 11 months. Since then he has continued to have fits at intervals of about nine months.

CASE 3.—A boy, aged ten and a half years. When eight months old he fell on his head and very shortly after had a fit. Since then—during the last nine and a half years—he has continued to have attacks of *grand mal* about once a month. The child is rather destructive but the intelligence is good.

CASE 4.—A boy, aged nine and a half years. The first [illegible] of nine months; he [illegible] next three months. [illegible] was quite good till eight years later, when he had an epileptic attack, which since then has recurred about once a fortnight. He has also become passionate and violent since the return of the fits.

CASE 5.—A boy, aged six years. The first fit occurred while the child was ill with diarrhœa at the age of five and a half years. Since then, though his general health is now good, he has had frequent attacks of *petit mal* and occasionally *grand mal*. He has become dull and heavy in manner, having previously been bright and intelligent at school.

As far, therefore, as my experience goes it seems impossible to draw any satisfactory dividing line between eclampsia and epilepsy. However *a priori* reasonable it may appear to be that fits arising with some definite morbid association should differ in kind from those arising when the child is in perfect health, it is very difficult to find any means of distinction which should be practically useful.

In the case of epilepsy the action of the motor cortex has the appearance of being automatic, while in the case of eclampsia it seems to be reflex. But it is hardly possible to make this distinction definite in fact, however clear it may be in thought. The more subtle forms of afferent impulse escape man's powers of observation, so that it may well be that all automatic manifestations of the cerebral cortex are really reflex. This [illegible] face with some ob[illegible] which are clearly of [illegible] termed epilepsy. In [illegible] ing cases are quoted.

CASE 1.—A boy, aged eight and a half years, had convulsions in infancy associated with teething, lasting off and on till he was two years old; then five years later he had a few typical epileptic fits. Since then about twice a week he has an attack in which his left arm shakes; it twists back behind him and goes stiff. There is no loss of consciousness and he sometimes manages to control the shaking to some extent by grasping the left arm with his right. His mother noticed that even in infancy his left arm shook whenever he was frightened and when there used to be an epileptic fit the aura often consisted of a peculiar sensation in the left arm which, however, did not move during the fit. There is nothing else abnormal about the boy; he is quite intelligent and satisfactory in his conduct.

CASE 2.—A boy, aged eight years, had convulsions in infancy and since then has been quite well till six months ago when he began to have attacks of retching but was not actually sick; in a few minutes he was all right again. Lately these attacks have changed in character; instead of

[1] THE LANCET, June 13th, 1896, p. 1635.

retching he works his arms, does not lose consciousness, and can speak while it lasts but his voice is peculiar and he seems to have a strange look in his face. Prior to the attack he feels as though he were going to be sick and works his arms in order to try to prevent it. These attacks last about two minutes and he then feels quite well again. In this case there have been no definite epileptic fits and in other respects he is quite normal and very intelligent.

CASE 3.—Two sisters, aged respectively five and three and a half years, suffer with periodical attacks of shaking of the arms. Soon after they were able to walk they would stop suddenly, look on the ground and begin shaking with both arms. These attacks occur specially when they are not occupied. Both children are quite intelligent but irritable. The father suffers from epilepsy. In these cases there have been no convulsions in infancy or epileptic fits.

CASE 4.—A boy, aged 10 years, is suddenly seized with inability to speak and seems to have lost his consciousness, but he says that he knows quite well what is going on. He has suffered from asthma and enuresis, but is quite satisfactory mentally. Both grandmothers had epilepsy.

CASE 5.—A boy, aged four and a half years, has had fits off and on since he was 18 months old. Ever since the first fit he has had attacks of sickness at night occurring with some regularity once a week. He also suffers from enuresis. He was quite well prior to the first fit.

With regard to the relation of vomiting to epilepsy, although an epigastric aura is so common yet actual vomiting as an aura or even prodromal symptom seems to be rare. However, one of these cases, a boy, aged three and a half years, who was having a fit every few months has an attack of vomiting some five hours before each fit, though at other times he is quite free from gastro-intestinal disturbance. The first fit occurred while he was cutting his canine teeth.

CASE 6.—A girl, aged nine and a half years, has a curious spasm in which her mouth and nose are drawn to the left. This occurs about once a week and prior to the spasm she feels as though "there were a lot of sweet stuff on the left side of the tongue." The spasm lasts about a minute; there is no pain or loss of consciousness. These strange attacks first occurred suddenly when she was seven years old. In this case there was no history of convulsions of a definite *petit mal* seizure. The mother had suffered from hysteria.

It is unnecessary to apologize for dwelling on these cases as, according to Dr. J. Hughlings Jackson, "in order to get clear ideas on this subject we must work at convulsions of all sorts from the slightest occasional spasms to the severest general seizures." It has seemed to me that the observation of cases such as these cannot fail to broaden the conception of epilepsy and of the conditions of spontaneous cerebral discharge in general.

Prognosis.—In our cases there was only one in which but a single fit occurred; still it must be remembered that such cases are least likely to come to a hospital for treatment. Then, too, it must be within the experience of many to have met with adults who say that they had convulsions in infancy or while teething but have been entirely free from anything of the kind since. These cases, therefore, give perhaps an exaggerated view of the probable recurrence of the fits, but I have certainly not found the fits less likely to recur which arose in association with some morbid condition than those which occurred spontaneously.

Effects on the mental condition.—About two-thirds of our cases seemed to be quite normal mentally and three were exceptionally intelligent and had particularly good memories. In each of these cases the fits began without any obvious cause and were clearly epileptic.

CASE 1.—A girl, aged eight years, had her first fit when seven years old. She was quite well prior to the attack. They at first recurred once a month, lately once a week, but the intelligence and memory are exceptionally good.

CASE 2.—A girl, aged ten years, had the first fit when three years old; the child was quite well prior to its occurrence. She had three more fits in the course of the next two years and then no more attacks of *grand mal*, but *petit mal* has supervened, two to three attacks occurring per diem. The child is in the sixth standard and the memory is exceptionally good.

The associations of the first fit in these cases of mental impairment were two with digestive disturbances, three with rickets, three with teething, two with traumatism, and eight are in the category of idiopathic epilepsy. There would seem, therefore, to be quite as much chance of a child becoming mentally affected from fits which have begun with a definite cause as from ordinary epilepsy. The frequency of the fits has not in our experience been an important factor in producing the mental impairment. In nearly all these cases the mental deficiency became manifest after only two or three attacks, while some of those described as quite intelligent and in a high standard at school were having fits with considerable frequency.

Effect of the fits on the moral condition of the child.—The bad effects of the fits on the moral condition and general character of the child is much more marked than on its mental condition. In the cases observed only a quarter were unaffected or could be described as morally normal. Of the remainder some were extremely irritable, others were subject to violent outbursts of passion, and others were mischievous and destructive. One child had tried to hang his younger brother; in this case there was mental deficiency and a very bad family history. Of the cases which were morally unaffected by the fits one half had begun as ordinary idiopathic epilepsy, while the other half had arisen in association with some morbid condition.

Effect of alcoholism in the parents.—It does not appear that this has exercised any specially bad influence on the prognosis. In a fourth of the cases the parents (one or both) drank to excess, in another fourth they were teetotallers, while the remaining half were distinctly moderate drinkers. With regard to mental weakness there were twice as many cases among children in whose parents there was no history of alcohol as among those whose parents were drunkards. As regards moral instability a slight preponderance was found in the ranks of the teetotallers and moderate drinkers.

Effect of heredity.—If the influence of alcohol is slight that of heredity is marked and important. In nearly half the cases there was a history of epilepsy, or insanity, or infantile convulsions in one or both parents or grandparents. Among the mentally backward twice as many owned an hereditary history. Of those who were noted as morally normal very few had an hereditary history, so that the bad effect of heredity would seem to be even greater on the moral character than on the mental condition.

Treatment.—One of the first questions which arises in this connexion is whether the child ought to go to school, parents being apt to regard school as a most potent cause of fits. As a general rule there should be no hesitation in allowing the child to attend school, which acts beneficially, by inducing some regularity in the child's life and by affording him definite occupation. There are, however, some cases in which the circumstances of school life seem to produce a constant state of excitement and by such, of course, school must be avoided. Others, again, are highly sensitive and suffer much from being teased and tormented by their companions, so that they too derive no good from school. It need hardly be said that anything like extra work for examinations cannot be indulged in with impunity. The point to be aimed at is that the life should be simple, regular, fully occupied, and free from excitement. I have tried a vegetarian diet with many of these children but am not justified in concluding that they have derived any benefit from it. In a disease such as epilepsy, in which spontaneous arrest may occur, it is almost impossible to arrive at any scientific conclusions as to the uses of drugs. Apart from cases mentally deficient there were few which have not improved under bromides, the fits decreasing in frequency and severity while the general irritability of the child is lessened. No ill-effects seem to result from bromides on the general health, apart from the bromide rash to which some children seem very susceptible and which may occur after quite small doses. One child had been taking bromide for two years, during the last few months the dose had been reduced, and finally at the end of two years stopped altogether as there had been no fit during that time. Three weeks later the patient had an epileptic fit. There was nothing to account for this except the cessation of the drug. The bromide was at once resumed and though, shortly after, she had another fit, which one might regard as due to her not being fully under the influence of the drug, she has subsequently (one year) been free from any further attacks. Where the bromides have failed I have in several instances found borax most efficacious as first suggested by Sir William Gowers.[2] Thus a boy, aged seven years, was having epileptic attacks with great frequency, both *grand mal* and *petit*

[2] Goulstonian Lectures on Epilepsy, 1870.

15 grains of the mixed bromides
t much improvement, when five
to the mixture, after which he was
ths, though just previously to the
wing as many as 11 fits in a week.
In some instances belladonna was found useful, especially in cases of *petit mal*, but it is very uncertain. The effect
oy a child who had
she had her adenoids
from the fits up to the present time (15 months). It is difficult to regard this as merely a coincidence.

Conclusion.—From what has been said in the foregoing *it will be easily gathered that we are compelled to take a* serious view of all convulsions occurring in infancy, and are not justified in supposing that even a single convulsion in childhood will end with itself and have no further evil influence on the life of the child. For most of these cases which have arisen in connexion with an extrinsic cause have also had a history of heredity or alcoholism in the parents which are both predisposing causes of epilepsy.
if we assume that
lf to produce a con-
he mere fact of the convulsions being often repeated makes the brain cease to be normal and creates a distinct pathological basis for the production of epilepsy. What the precise relation of such convulsions to epilepsy may be it is impossible to say, and for this reason it seems unfortunate that infantile convulsions and epilepsy in many text-books on diseases of children are dealt with in different chapters; for the impression is conveyed that there is a much greater difference between these two affections than, in my opinion, the facts seem to warrant. It is true that we find the distinction between the two emphasized by Koplik, who says "epilepsy is a true disease of the nervous system and has nothing in common with, and no demonstrable relationship to, infantile convulsions." Holt also speaks of both affections as being quite distinct, and as a result of his large experience among children we find him saying "in a highly susceptible nervous child a convulsion often means no more than an attack of migraine in an older person." It might, however, be said in passing that many physicians consider epilepsy and migraine to be nearly related. The serious view, however, here taken of infantile convulsions is borne out by Sir William Gowers, who says, "no convulsion in childhood should be looked upon as of little moment, no matter how prominent an exciting cause may be discovered." And again, "even a single fit in childhood indicates the need for careful supervision." Finally, Dr. Hughlings Jackson says, "I find it hard to believe that eccentric irritations of any sort can act on the nervous centres, when they are healthy, so as to produce a convulsion."

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HÆMOCONIA.

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AFTER eliminating the various elements of the blood of which there is more or less accurate knowledge there remain others of which there is no adequate description to be found in literature. These may be grouped into three classes: (1) cell débris; (2) parasites; and (3) hæmoconia.

The earliest reference to these less known elements of the blood is to be found in a paper by Dr. F. W. Mott and Dr. I. Blore,[1] who regarded them as micrococci. These observers describe the bodies thus: "We have examined the blood in 12 cases [of typhus fever] during the pyrexial stage, and in
inuto screws, have been seen.
be made out and we consider
cci undergoing division. Often
t these were found to measure
In one case, there were large numbers in the blood after the fever had subsided; but, as a rule, they disappeared on convalescence."

The next observer to mention them was Doehle[2] who found them to be present in the blood of patients suffering from measles, scarlet fever, small-pox, and syphilis. He described them as small spheres (from 0·5 to 1μ) which were either homogeneous or contained a highly refractile nucleus surrounded by a clear zone. They showed movements which, in some instances, could be observed to be due to the action of a flagellum four or five times the length of the body. Occasionally two spheres were inclosed in a common capsule. He also noticed granular and amœboid elements (2·5μ) and ill-defined rod-like protoplasmic bodies possessing small flagella. Pfeiffer[3] describes similar bodies with flagella which he found in the blood of patients suffering from variola and vaccinia.

The next descriptions are those of Muller and Reed. Muller, who gave to these elements the name of "hæmoconia,"[4] states that they are found in the blood as very small granule or cocci-like colourless corpuscles, highly refractile, with a very active molecular movement, which keep their shape under observation for a very long time without any special precautions. He found them in every normal blood in varying numbers and was unable to stain them with osmic acid. Various other observers have considered them as free granules of neutrophile or eosinophile leucocytes or produced by fragmentation of the red blood corpuscles.

Observations made by myself on the blood of patients *suffering from the diseases above mentioned and on the* blood of patients suffering from typhus fever have demonstrated that there exists in the blood a number of forms which may be grouped into four classes: 1. Protoplasmic bodies containing a number of bright refractile points. There is no difficulty in demonstrating the origin of these as portions of neutrophile cells when stained with Biondi's fluid. They are observed frequently in blood where disintegratio
in hæmor-
rha
in typhus
fev
om 0·5 to
1μ
bodies, also
apparently motile, from 0·5 to 2μ in length. 4. Dumb-bell forms, from 2 to 4μ in length, and apparently motile. With regard to the last three forms, it is probable that they belong to the same class as they are all small, colourless, refractile bodies lying free in the blo
active tremulous movement.
to the position which they
appear as described in Class
dance about in an apparently aimless fashion, disappearing and reappearing with great rapidity as they pass out of focus or come into view again. Under certain optical conditions they appear to possess flagella, but it cannot be stated positively that these organs exist. It is interesting to note that these bodies are also found in the lymph from the early vesicles of small-pox.

In no circumstances has success been attained in staining these elements, even in the lymph of the variola vesicle, where they exist in considerable numbers. They do not stain with osmic acid or with Soudan red, my experience agreeing with that of Muller in this respect. Whether this is due to the fixing it is difficult to say, but they have never been observed except in freshly drawn fluids. All modes of fixing—heat, Hermann's solution, Fleming's solution, and corrosive sublimate—apparently destroy them, or at least cause them to disappear.

In typhus fever these bodies are constantly found in the freshly drawn blood. They are observed throughout the
t appear in greater numbers
Apparently no prognostic
their presence as they are as frequently observed in fatal as in non-fatal cases. There seems to be no doubt also that these bodies possess no etiological relationship with the disease in which they are present but with regard to their abundance in many cases of typhus fever my experience tallies with that of Dr. Mott and Dr. Blore. It has been suggested that they are derived from the disintegration or fragmentation of leucocytes or red blood corpuscles but the fact that they do not stain is almost sufficient to negative this idea and their mysterious disappearance during the process of fixing renders the collapse of the theory absolute.

Glasgow.

1 Dec. 1st, 1883.
2 Pathologische
Anatomie und
Parasitologie, Band xii., p. 906.

3 Die Protozoen als Krankheitserreger, 1895.
4 Centralblatt fur Allgemeine Pathologie und Pathologische Anatomie, 1896.

AN UNUSUAL CASE OF DIAPHRAGMATIC HERNIA.

BY H. B. G. NEWHAM, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H. CANTAB.

THE patient was a plasterer's labourer; he was a steady, hard-working man with no history of previous illness. On July 11th, 1904, he was engaged in taking down some scaffolding when he overbalanced and fell to the ground, a distance of some 30 feet. He was immediately removed on an ambulance to the David Lewis Northern Hospital and I am enabled, through the courtesy of Dr. T. J. Barry, the house surgeon, under whose care he was, to give a few notes of his condition on admission and also to trace the further progress of his case whilst he was in that institution. When admitted (at 3.30 P.M.) he was found to have sustained a fracture of the left femur through the middle third of the shaft of that bone accompanied by considerable bruising of the chest and abdomen but without signs of any fracture of the ribs. He was also vomiting and in a generally greatly collapsed condition. On examination of the abdomen some dulness was made out in the flanks which shifted on moving the patient. The diagnosis was made of probably ruptured spleen, but owing to the general grave condition of the patient operative interference was out of the question. Minim doses of iodine were successfully employed to control the vomiting and later in the day, owing to the great pain in the abdomen, a hypodermic injection of morphine (a quarter of a grain) with atropine was administered. Towards midnight his condition became more serious, with small pulse, great collapse, and a temperature of 102° F. To meet this two pints of normal saline solution were transfused. This revived him somewhat but an hour later he had a rigor. On the next morning (the 12th) the patient was found to be somewhat improved and the temperature was normal, at which it practically remained throughout his stay in the hospital. The vomiting started again on the 13th and did not cease until towards the evening of the following day in spite of the administration of suitable remedies. On the 18th the patient complained of a good deal of pain in the lower part of the abdomen, accompanied by diarrhœa. Hypodermic injections of morphine (a quarter of a grain) were employed to relieve the pain. Towards evening vomiting again started and persisted for four days in spite of the fact that nothing was given by the mouth, the patient being fed with nutrient enemata. From this time onwards until his discharge on Sept. 16th he progressed fairly favourably, except for some considerable pain over the cardiac region, somewhat increased on taking his food which consisted of milk, bread-and-butter, and milk pudding.

After leaving the hospital he still continued to complain of pain over the cardiac region, which increased on taking food but was unaccompanied by any vomiting. In consequence of this he took very little nourishment and wasted considerably. On Nov. 16th he was suddenly seized with most severe pain in the abdomen, accompanied by dry retching and intense thirst, and was taken by his wife to see a medical man who, on examining him, advised him to go to hospital; this, however, he refused to do and remained in his own home. The medical man gave him some medicine and ordered him castor oil, on taking which he became much worse and, as his wife expressed it, "quite writhed in agony." After application of hot fomentations, however, he became somewhat easier. The symptoms continued more or less severe all the next day and on the 18th he suddenly became unconscious and died in about half an hour. From the 16th, when he was taken ill, till the 18th, when he died, he had no movement of the bowels and the only nourishment taken was a little milk.

Necropsy.—At 11 A.M. on Nov. 20th I performed a post-mortem examination. Externally the body showed a good deal of wasting. Examination of the left leg revealed a fracture through the middle third of the shaft of the femur which had united firmly but with a good deal of thickening round it and with a loss of about two and a half inches in the length of the limb. No signs were found of fracture having occurred in the ribs or other bones. On removing the chest wall, the first organ to present itself to view was the stomach, accompanied by part of the transverse colon, both greatly distended, and the latter showing signs of strang tion. These practically filled the left side of the thc except for about ten ounces of blood-stained fluid which present. The left lung was firmly pressed back against spinal column; it was quite airless, small, and deeply mented. The heart was healthy, though small, and pu over well to the right of the sternum. The right lung completely bound down by pleuritic adhesions and was difficulty removed from the body. The lung on side was rather smaller than usual and somewhat conge On examination of the diaphragm an opening slightly to left of the middle line, with smooth edges and e admitting the index finger, was found, through which stomach and intestine had escaped into the thoracic ca The liver was of average size and healthy, but some more to the right side than usual. All the other org including the brain, were quite healthy.

The hole in the diaphragm appears undoubtedly to been made at the time of the accident and was prob caused by sudden violent muscular contraction. It se however, almost incredible that such a large hernia, w must have existed for some time to produce such pres symptoms—e.g., compression of lung, &c.—could be c patible with life.

Liverpool.

A CASE OF CONGENITAL HYPERTROPH STENOSIS OF THE PYLORUS IN WHIC PYLOROPLASTY WAS UNSUCCESS-FULLY PERFORMED.

BY J. RUTHERFORD MORISON, F.R.C.S. ENG. AND ED
SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

AT the present time when so much attention is being p to the subject of congenital stenosis of the pylorus, especially when its treatment by operation is promine before the profession, it seems proper to report every of surgical intervention irrespectively of the result. I asked to see the following case with Mr. A. Dryden. had made a correct diagnosis and, recognising the efficiency of hygienic and medicinal means, was anxi that an operation should be performed.

The patient was a male infant, seven weeks old. parents were healthy and there was no history syphilis. Delivery was assisted by forceps and at bi the child appeared to be quite healthy. He vomi more or less from birth. From the first he was on Mellin's food from a screw-stoppered bottle. bowels were very constipated and they never ac without medicine. Enemata, castor oil, magnesia alterative powders were successively used, but without benefit. Up to the age of five weeks the vomiting o occurred as a rule every two or three days, but sometin more frequently. During the sixth week the child p gressively lost flesh. A one-cow milk diet was tried a there was no vomiting for two days; at the end of t time it restarted and occurred regularly every 24 ho between 4 and 5 A.M. In the seventh week the child very ill; he vomited after every meal and rapidly l flesh. At the time of the operation he was extrem emaciated and lethargic. The stomach was seen to be c tended and was every now and then mapped out by a wave contraction. No mass could be felt at the pylorus. condition was so desperate that an immediate operat seemed to offer the only chance of recovery. Shortly bef the operation two ounces of normal saline solution w injected under the skin of the chest wall just below clavicles. Great pains were taken to prevent shock and little chloroform as possible was used. A median incis above the umbilicus exposed the stomach, which was m dilated and was contracting vigorously. The pylorus loo normal but felt firm and thickened, and this condition tended along the stomach for about half an inch. It w determined to perform pyloroplasty. After opening t stomach it was found that the pylorus would only adm a pair of closed Spencer Wells artery forceps with so difficulty and the pylorus could be felt dilating as th were passed through. The stomach wall at the pylo ring was very thick and this only gradually passed into t

normal as it was traced towards the body of the organ The incision was prolonged into the duodenum, which was normal in thickness, until its whole length was about one and a half inches The operation of pyloroplasty was difficult to perform because of the thickness and friability of the stomach wall Two rows of sutures were used, the first through all the coats and the second Lembert fashion The latter were the most difficult to apply, for the line of incision could only with difficulty be tucked in on account of the thickness of the stomach wall At the end of the operation the line of suture looked very secure, the pylorus was sufficiently wide but was flattened as if the anterior and posterior walls were approximated The abdominal incision was closed with through and through silkworm gut sutures The operation took about 25 minutes and was attended by very little shock As soon as the effect of the anæsthetic passed off mouth feeding was begun Vomiting recommenced and occurred about every half hour until the patient died 30 hours after the operation

When examined post mortem the body was found to be very greatly emaciated The stomach was distended and contained some curdled milk. The suture line was secure and did not allow any leakage The pylorus was almost occluded, being represented by a vertical slit that would only admit a probe When the stomach was distended with water none escaped through the pylorus This was obviously due to blocking by the thick tucked in pyloric ring On the anterior wall one and a half inches from the pylorus there was a small excavated ulcer about one sixteenth of an inch in diameter It extended to the muscular coat and the mucous membrane immediately surrounding it was infiltrated with blood, so that it looked as if the ulcer had arisen in a blood extravasation, there were no other ulcers A microscopic examination of the pylorus showed the thickening to be composed entirely of unstriated muscle The other abdominal viscera were normal, there was no examination of the chest or head

Newcastle-on Tyne

NOTE ON A CASE OF ACUTE CEREBRAL ABSCESS

BY A L WHITEHEAD, M B, B S LOND,
OPHTHALMIC AND AURAL SURGEON TO THE GENERAL INFIRMARY LEEDS

ALTHOUGH chronic cerebral abscess, latent for an indefinite period but ultimately giving rise to acute symptoms, is not uncommon, acute abscess secondary to ear disease is rare

The case now recorded occurred in a lad, aged 14 years Apart from some deafness associated with a chronic purulent discharge from both ears for 12 months the boy had enjoyed perfectly good health up to Jan 26th, 1904 At three in the afternoon of that day he left school complaining of severe headache The pain grew rapidly more intense and the boy became very irritable, crying out constantly of pain in the head, chiefly in the frontal region and never referred to one or the other side During the next 24 hours he vomited twice and became drowsy but resented interference and was at times delirious When seen by his medical attendant, Dr P S Bird, on the evening of the 27th he could not be roused looked very ill, and had a temperature of 103° F He was sent to the hospital the same night and was admitted under my care His temperature was then 101 8°, his pulse was 120, and his respirations were [illegible] ial stupor, resented interto answer questions, but [illegible], complained of pain in the head and repeatedly placed his left hand to the left side of the head The knee jerks could not be elicited, but there were free movement of all the limbs and no obvious paralysis of any muscles The pupils were equal and reacted to light, there was a tendency to divergent strabismus Both auditory meati were full of pus, the membranæ tympanorum were destroyed, and the tympanic cavities were full of granulation tissue There were no external signs over the mastoids but apparently some tenderness to pressure on both sides

Chloroform was administered half an hour after his admission and the left mastoid was explored, very extensive bone disease with much pus, granulation tissue, and débris was found, the dura mater was exposed by the disease and was found to be covered with granulations, it was opened and the overlying temporo sphenoidal lobe was explored, no abscess was found A similar operation was performed on the right side with the same negative result The boy was much collapsed after the operation and was only kept alive by oxygen and strychnine On the following day, Jan 28th, he was very restless, his arms and legs moving constantly, and there was some retraction of the neck The pulse was 120, very feeble, and his temperature was 97° The loss of consciousness was complete On the two following days his condition remained the same Cerebro spinal fluid drawn off through a lumbar puncture was examined and reported to be perfectly normal On the 31st while dressing the wound I noticed that the exposed dura mater on the left side looked quite healthy but on the right side was of a dirty grey colour and bulged outwards A pair of dressing forceps pushed about an inch through the cerebral cortex at once evacuated a considerable quantity of blood stained semi purulent fluid, together with fragments of necrosed brain substance On the following day he was quite rational and talked with his friends Convalescence was uneventful but slow, being retarded by an attack of pleurisy without effusion The abscess was drained for three weeks, at first a large quantity of pus coming away daily At the end of a month the discharge had ceased and the mastoid cavity was grafted on both sides with a good result, ordinary conversation being now heard without any difficulty

Undoubtedly in this case an acute suppurative cerebritis was present at the time of the exploratory operations but no collection of pus having formed the exploring tube simply passed through the softened brain substance The subsequent operation evacuated the pus and the necrosed brain matter The diagnosis was rendered more difficult by the presence of bone disease in both mastoid processes and there were no guiding signs or symptoms to indicate the affected side Otorrhœa, vomiting, intense headache, and drowsiness passing into coma were the only definite grounds on which a diagnosis of cerebral abscess could be based The more common symptoms, including constipation, optic neuritis, slow pulse, subnormal temperature, hemiplegia, &c, were entirely absent In many cases of cerebral abscess, even after the most careful study of all the symptoms, it is often most difficult to arrive at a correct diagnosis and in some [illegible] to certainty [illegible] nosis between [illegible] most which can [illegible] e urged in all [illegible] are somewhat indefinite To recommend an operation for the relief of cerebral abscess only in those cases in which the diagnosis is certain is to sacrifice many lives which might ultimately be saved.

Leeds

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON

Experiments on the Grafting of the Thymus Gland in Animals —The Production of Leucocytosis by Colchicine — Alterations in the Systemic Circulation which tend to produce Engorgement of the Lung Capillaries

A MEETING of this society was held on Dec 20th, Dr F W PAVY, Vice President being in the chair

Mr L S DUDGEON and Dr A F RUSSELL communicated a paper on the Effects of Intraperitoneal Grafting of the Thymus of Young Animals into other Animals of the same Species and the same Litter One kitten, one rabbit, and four puppies were grafted In three of the puppies the thymus glands from two puppies were inserted into the peritoneal cavity Control animals were used and in one case (Dog II) the animal was anæsthetised and a negative operation was performed, the abdomen being opened and forceps moved about in the peritoneal cavity From an examination of the red cells, the hæmoglobin, a differential count of 500 leucocytes, and from the results of the post mortem examination in the case of the cat, the rabbit, and three of the dogs it was concluded (1) that intraperitoneal grafting of thymus gland tissue did not affect the health of the grafted animal, (2) that it did not

produce any marked blood change, certainly no lymphocytosis; (3) that it did not produce any overgrowth of the lymphoid tissue throughout the body; (4) that it produced no change in the bone marrow, liver, or spleen; and (5) that the grafted thymus attached itself to the peritoneum of the intestine, omentum, or abdominal wall, speedily degenerated, became infiltrated with round and polynuclear cells, and finally was represented by a small mass of fibrous and adipose tissue. In the case of two of the dogs marked rickets with severe blood changes occurred but considering that in one of them (Dog A) only one thymus was grafted and that the other (Dog H) had merely been subjected to a negative operation it was felt that the changes were to be attributed rather to the general environment. In both animals the leucocytes diminished—in Dog A from 30,400 to 4140 and in Dog H from 12,360 to 8560. In the grafted animal a distinct lymphocytosis occurred, not in the control. Eosinophilia occurred in both. Large numbers of normoblasts and megaloblasts made their appearance. The presence of macrocytes, microcytes, poikilocytes, and of polychromatophilic degeneration appeared to be very common in young dogs. In these two animals these conditions were more marked after than before the operation. In both dogs at the time when they were killed, ten and 12 weeks respectively after operation, typical rickets was present. In both there was a general enlargement of the glandular and lymphoid tissue throughout the body with the exception of the tonsils. The thymus in each case was very large, weighing 20·65 and 17·8 grammes as compared with the normal, about 2·3 grammes for young dogs. In the control dog, H, the spleen showed marked endothelial cell proliferation with enormous numbers of giant cells. The bone marrow also showed numerous giant cells, myelocytes, megaloblasts, and normoblasts.

Dr. W. E. DIXON read a short paper on the Production of Leucocytosis by Colchicine. He said that colchicine was used as a specific for gout but in what way it acted was quite unknown. In animals it acted as a slow poison and death took place slowly in about two hours. In however large doses the drug was given death took place in the same way quite slowly. An immunity to the drug could be produced in animals by gradually increasing the dose. The effect of colchicine on the leucocytes was very marked. At first a leucopenia was produced which affected mainly the polymorphonuclear leucocytes so that a few hours after the drug had been given the number of these cells in the peripheral circulation fell to a very marked degree and then rose to far beyond the normal. Many of the leucocytes became swollen, the nucleus was indistinct, and the granules were extruded from the cell. These degenerate leucocytes eventually passed to the lung and to the bone marrow. The number of the red corpuscles in the blood was increased to a slight extent and the specific gravity of the blood was also increased. The effect of the drug lasted about 24 hours. He next tried the effect of colchicine on the bone marrow. He found that in young rabbits the bone marrow became hyperæmic and filled with a form of corpuscle which was probably the polymorphonuclear leucocyte of the peripheral circulation. The fat of the marrow was degenerated.—Mr. DUDGEON pointed out that it was an easy matter to extrude the granules outside the cells by pressure on the cover-slip. He stated that the eosinophile cells very rapidly disappeared after injection of pyogenic organisms and that the amphophilic cells which were peculiar to rabbits disappeared after injections of staphylococci.—Dr. J. FAWCETT asked whether any observations had been made in man with regard to the leucocytosis after the administration of colchicine.—Dr. H. BATTY SHAW said that colchicine seemed to act as a stimulant to the bone marrow and if this was so then an increased mitosis should be present. He asked whether Dr. Dixon had observed such a mitosis.—Dr. W. S. LAZARUS-BARLOW asked in which bones the marrow had been examined and in which part of the bone. He pointed out that the marrow in the bone differed to a very marked degree not only in different bones but also in different parts of the same bone.—Dr. DIXON replied that observations on the action of colchicine in man had been undertaken but were at present incomplete. An increased mitosis had been observed in the cells of the bone marrow.

Dr. T. G. BRODIE and Dr. DIXON made a communication on the Alterations in the Systemic Circulation which tend to produce Engorgement of the Lung Capillaries. The filling of the lungs with blood was produced equally by the obstruction of the left side of the heart or by an increased output from the right side of the heart. With cardiac inhibition the volume of blood in the lungs was diminished; with cardiac acceleration the volume of blood in the lungs was increased. Inhibition of the heart caused a fall in the arterial pressure and in the pulmonary artery, while the venous pressure was raised. The volume of blood in the lungs was diminished, the blood accumulating probably in the left auricle. Cardiac acceleration sent up the pulmonary blood pressure with a fall in the auricular pressure both on the right side and on the left. The changes of cardiac condition produced more marked effect on alteration of the volume of blood in the lung than any other interference with the vascular system. Another way in which the pulmonary pressure was altered was by the interference with the supply of blood to the right side of the heart. An injection of a small quantity of blood into the portal vein gave rise to a very marked rise of blood pressure. The effect produced was simultaneous all through the blood system. The circulation of the lung was quite passive and behaved according to the amount of blood put into it by the right side of the heart or removed from it by the left side of the heart. There was, however, no evidence that the lung could act as a reservoir. With regard to the action of adrenalin, which had been recommended for the treatment of hæmoptysis, he said that there was no evidence that the drug produced any constriction of the vessels of the lung. Adrenalin acted in two ways: first, by constricting the peripheral circulation and, secondly, by stimulating the heart. The volume of blood in the lung was thus increased and it was therefore a drug which should not be used in cases of hæmoptysis. Ergot produced a rise in the pulmonary blood pressure and increased the volume of blood in the lungs. Digitalis produced a constriction of the systemic vessels, a rise in the pulmonary pressure, and an increase in the volume of blood in the lungs.—Dr. ALEXANDER MORISON referred to the diminution of the blood pressure produced by venesection. He asked whether the withdrawal of a small quantity of blood would diminish the volume of blood in the lungs as the injection of a small quantity of blood into the portal circulation seemed to increase the volume of blood in the lung in the experiments related by Dr. Brodie.—Dr. BRODIE replied.

LIVERPOOL MEDICAL INSTITUTION.

Chancre of the Nostril.—Actinomycosis.—Constriction of the Ureter.—Perineal Prostatectomy.—Sarcoma of the Femur.

A MEETING of this society was held on Dec. 15th, Dr. J. R. LOGAN, Vice-President, being in the chair.

Dr. J. MIDDLEMASS HUNT showed a case of Primary Syphilitic Infection of the Nostril. The chancre was situated on the left side of the septal cartilage. The patient, a youth, aged 17 years, had suffered from one-sided nasal obstruction and discharge for two months. There was considerable glandular enlargement on the affected side and within the last fortnight a characteristic rash had appeared on the face and body. No history could be obtained as to the source or mode of infection.

Mr. D. DOUGLAS-CRAWFORD read a note on two cases of Actinomycosis. The first case was that of a ship's surgeon, the skin of the flank being the affected area. In the second case the patient was a butcher and the submaxillary region was the part infected. Excision was performed in both cases with satisfactory results.

Mr. K. W. MONSARRAT read a note on Constriction of the Ureter. After enumerating the different types of constriction he related three cases illustrative of the condition. The first was a case of true stricture of the pelvic ureter which gave rise to symptoms mistaken for those of appendicitis; a successful result was effected by dilatation of the ureter from the bladder. The second case was one of hydronephrosis in which the ureter was flattened against, and bound by adhesions to, the hydronephrotic sac; a plastic operation upon the ureter was successfully performed. In the third case there was pyonephrosis with stricture of the ureter at its junction with the renal pelvis. Mr. Monsarrat suggested that in the etiology of similar cases of primary pyelitis of obscure origin renal stasis caused by ureteral obstruction probably played an important part.—Mr. GEORGE G. HAMILTON, Mr. W. RUSHTON PARKER, Mr. R. A. BICKERSTETH, Dr. R. J. M. BUCHANAN, Mr. F. T. PAUL,

Dr N E ROBERTS, Dr W ALEXANDER, Dr T B GRIMSDALE, Mr G P NEWBOLT, Mr F C LITLER JONES, and Mr DAMER HARRISSON took part in the discussion

Mr RUSHTON PARKER read a note on Perineal Prostatectomy He practised the operation as described by Dr Parker Syms at the Manchester meeting of the British Medical Association in 1902 He had thus operated upon eight cases between December, 1902, and November, 1904 The ages of the patients varied from 59 to 76 years, five of them being over 70 years of age The prostates removed varied in weight from three eighths to three and five eighths of an ounce All the patients had been unable to pass urine without the use of a catheter before operation and all had subsequently become enabled to hold and to pass urine comfortably, except one case which terminated fatally The after treatment consisted in drainage of the bladder by means of a long tube for from two to five days and plugging of the prostatic gap for 24 hours with strips of gutta percha tissue in preference to gauze The gutta percha strips could be removed without disturbing the patient or causing hæmorrhage A catheter was passed daily and the bladder was washed out —Dr ALEXANDER, Mr DOUGLAS CRAWFORD, and Mr NEWBOLT took part in the discussion

Mr C THURSTAN HOLLAND read a note based on a case of Central Round celled Sarcoma of the Upper End of the Femur The patient was under the care of Mr Newbolt at the Royal Southern Hospital A series of radiographs were shown illustrating various diseases of bone bearing on the subject the x ray appearances of central round celled sarcoma, myeloid sarcoma, periostal sarcoma, abscess of bone, and so on, were discussed The fact that operation so frequently followed [illegible] ed to be probably due [illegible] late By the help of a [illegible] ion might be cleared up very much earlier in the history of these cases and thus enable better results to be obtained by means of operative treatment —Mr NEWBOLT described the clinical history of the case He had performed amputation at the hip joint but the patient died on the day following the operation —Mr BICKERSTETH, Mr PARKER, Dr ALEXANDER, and Mr HARRISSON took part in the discussion

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY

Radical Treatment of Hernia —Intestinal Obstruction

A MEETING of this section was held on Dec 2nd, Mr ARTHUR CHANCE the President, being in the chair

Mr EDWARD H TAYLOR read a paper on a New Method of Procedure for the Radical Cure of Inguinal and Femoral Herniæ With the patient in the Trendelenburg position a vertical incision about four inches in length was made midway between the middle line and the outer border of the rectus muscle in its lower part The superficial tissues and the rectus sheath having been divided the outer lip of the divided sheath was raised and the corresponding border of the muscle was defined and drawn inwards The transversalis fascia was then divided and the extraperitoneal fat was exposed The next step consisted in fully retracting the outer margin of the wound towards Poupart s ligament and identifying the neck of the hernia By seizing the parietal peritoneum close up to the internal abdominal ring with the finger and thumb, the sac was drawn up to some extent out of the inguinal canal and opened, after which a finger was introduced into its interior to act as a guide while it was being separated from the structures of the cord A ligature or purse string suture was then applied to the neck of the sac and the fundus was cut away The inguinal canal and the two rings were now explored by the finger, the structures of the cord were identified, and the deep epigastric vessels were held aside By means of special needles in handles—modifications of the ordinary aneurysm needle with a slot at one side opening into the eye—a series of silk sutures (No 6 size) was passed so as to connect the conjoined tendon and the transversalis muscle with Poupart s ligament, just enough space being left to allow the structures of the cord to pass without being unduly compressed The rectus muscle now resumed its normal position, but for greater security its outer border was connected to the deep aspect of the transversalis muscle by a few interrupted sutures Finally, the rectus sheath was closed in front by interrupted sutures also, and the skin margins were approximated by a continuous subcuticular suture of silkworm gut Should the external abdominal ring be unduly patulous it might be readily exposed before closing the wound by drawing aside or reflecting the overlying tissues and its dimensions reduced by one or two sutures In the case of femoral hernia the steps of the operation corresponded to the above up to the point at which the femoral ring was exposed The sac was isolated as already described, ligatured at its neck and its fundus cut away The closure of the femoral ring was then effected Two sutures generally sufficed for this purpose Each passed through the conjoined tendon and Poupart s ligament in front, beneath Cooper s ligament behind In some cases it was advisable to pass them through two holes previously drilled in the pubic bone The operation was best suited for large well developed inguinal herniæ in which the inguinal canal had undergone marked changes in size and direction The sutures in the conjoined tendon should not be tied too tightly and the parts should be kept at absolute rest for at least a fortnight Mr Taylor pointed out that a somewhat similar method for occluding the femoral ring had been described by Mr Mayo Robson in the "Year book of Treatment (1904) but, nevertheless, it differed from his in certain important particulars —Mr G JAMESON JOHNSTON expressed himself in favour of Bassini s operation, as he considered it the simplest, the most scientific, and the easiest He regarded the objection to dividing the aponeurosis of the external oblique in this operation as more or less theoretical Mr Taylor s operation would probably be a good one in old herniæ in which the internal abdominal ring approached the middle line —Mr T E GORDON said that, in his opinion there was no one method of operation for hernia and Mr Taylor s method was not suitable in the case of a congenital hernia in a young child

Mr GORDON read an account of a case of Acute Intestinal Obstruction from a Gall stone The patient was a woman, aged 73 years An operation was performed on August 11th and she was able to leave her bed about a fortnight afterwards

EPIDEMIOLOGICAL SOCIETY —A meeting of this society was held on Dec 9th, Sir Patrick Manson being in the chair —Dr G H F Nuttall read a paper on Ticks and Tick transmitted Diseases Ticks, he said, were a large order of arachnidæ all blood sucking parasites, attacking most mammalia and birds as well as some reptiles and insects They were provided with a powerful haustellum for sucking blood and eight legs armed with sharp claws, the larva having but six Their bites gave rise to ill understood effects, often grave and even fatal, but their chief interest lay in the fact that they were the intermediary hosts of a group of hæmatozo[illegible] one spiro[illegible] chæte which [illegible] blood cells induced certa[illegible] er, anæmia, hæmoglobinuria, and icterus, the ravages of which had in many districts assumed alarming proportions Such were the Texas fever or redwater fever in America and Queensland and the Rhodesian fever in South Africa among cattle with similar diseases of horses sheep, and dogs elsewhere, and one of poultry in Brazil The males and the immature forms were not so voracious as the perfect female which when gorged with blood was distended to a hundred times its natural size It laid enormous numbers of eggs, sometimes as many as 3000 on the ground, whence the young larva climbed up the stems of grass or shrubs to await the passing of an animal suited for their purpose If the meeting took place within a reasonable time they transferred themselves to it, attaching themselves to its skin by claws and rostrum, otherwise they died from starvation [illegible] as those of Texas fever, [illegible] ormations into pupa and imago on the [illegible] ey did not leave until the female was ready to lay its eggs Others, such as that of the dog, dropped off after gorging themselves, undergoing all their changes on the earth, and required three hosts in succession The risk of dying for want of a prey was thus increased threefold very few reaching maturity, whereas in the case of Texas fever large areas of the hide might be actually hidden by adherent ticks in every stage of development Those attacking cattle were the

rhipicephalus annulatus in [illegible] australis in Queensland and Africa, and [illegible] annulatus in Rhodesia and the Cape. Sheep were attacked in parts of Europe by the rhipicephalus bursa, and in Africa by the amblyomma hebræum (Koch). Dogs were attacked by the hæmaphysalis Leachii in South Africa and by a dermatocentor in Europe. The argas persicus was believed to be the agent in a fever attacking man in Persia and others in Africa and in the Rocky Mountains. Those attacking horses and asses in Africa, South America, and parts of Europe were not as yet determined. A peculiar disease of fowls in Brazil was caused by the tick called argas miniatus, the specific organism being the spirochæte Marchouxi, a species closely resembling the spirochæta Obermeieri found in the blood of patients suffering from relapsing fever. In all the others the parasite was one or other species of piroplasma. A female sucking the blood of an infected animal laid infected eggs, but the infected larva did not always communicate the disease, and a larva or pupa infected from an animal might or might not be infective before reaching the imago stage, different species behaving differently. The adult tick was very long lived and the contained piroplasma lived as long as its host, having been found after the tick had been starved for many months. Little was known of the life-history of the piroplasma, though Dr. Nuttall had noticed peculiar extracellular bodies bearing some resemblance to the gametes of the malarial parasites. There was an incubation period of from eight to ten days in Texas and Rhodesian fever and of two or three weeks in that of dogs. If recovery took place a kind of immunity was left, the piroplasmata persisting in the blood without producing any symptoms, though the blood was infective to healthy animals when injected directly or through the medium of ticks and though some intercurrent disease or exposure to depressing influences might bring about a recurrence of the original attack. Immunised or "salted" cattle were therefore a source of danger to others. Texas and Rhodesian fevers were not mutually protective, the piroplasma parvum of the latter being distinct from the piroplasma trigeminum of the former or from the several species that were included under that name, but mixed infections with two or more specific forms were not infrequent. The life-history of the spirochæte was not known but Schaudinn had recently described a spirochæte developing out of a trypanosoma which was itself a phase of the halteridium, an endoglobular parasite of birds. The facts that certain pastures were specially infective so that a mere fence might separate the infected from the clean fields, that stalled cattle escaped while those out on pastures suffered, and that sporting dogs were attacked while those in towns were not, were easily explained by the habits of the tick. Attempts at immunisation had been failures and the only hope lay in the extermination of the tick. Insecticide dips were useful in reducing their numbers; burning the grass on infected pastures had been advocated; quarantine should certainly be enforced and horses only should be pastured for two years on fields where cattle had suffered or *vice versâ* so as to starve out their respective ticks. Summarising the geographical distribution he would say that bovine piroplasmosis (Texas or redwater fever) occurred in the United States, West Indies, Venezuela, Uruguay, Paraguay, Brazil, Queensland, various parts of Europe, Africa, India, China, and the Philippine Islands. Rhodesian fever (bovine) occurred in Rhodesia and South-east Africa, and apparently also in Transcaucasia. Ovine piroplasmosis was met with in Roumania, in Italy, in France, in the West Indies, in the United States of America, and in South Africa. Equine piroplasmosis occurred in Germany, in South Africa, in Madagascar, and in Venezuela. Canine piroplasmosis occurred in France, in Italy, in North and South Africa, and in India, while the spirochætal fever of fowls seemed to be limited to Brazil and the Argentine Republic.—Sir Patrick Manson said that he was particularly struck with Dr. Nuttall's reference to the conditions under which piroplasmosis recurred as illustrating the etiology of blackwater fever, which might be a disease of this kind, the malarial attack or the large dose of quinine acting simply as an exciting cause. He also made an allusion to the karapatti disease of Zambesi, which was spread by the kufu, a species of tick, [illegible] to man. It and blackwater fever were [illegible] plasmoses.—Dr. G. C. Lowe said that a friend of his had demonstrated a spirillum in karapatti disease. Rhodesian fever was spreading southwards and killing in some districts 90 per cent. of the cattle.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 9th, Dr. A. Bronner being in the chair.—Mr. R. Lawford Knaggs read a paper on two cases of Bullet Wound of the Brain, in both of which the bullets had penetrated to a considerable depth and were *left in situ*. In the first case no ill-effects had been noted during the seven years that had since elapsed. In the second serious symptoms developed a fortnight after the injury and a large area of bone was removed in the nearest position to the bullet. The dura mater was crucially incised and gold foil was placed over the protruding brain. The flap was replaced. Rapid subsidence of symptoms followed and the patient left the hospital quite well. This was 11 months ago and no further trouble had occurred.—Dr. T. Wardrop Griffith showed two brothers with the hereditary form of Spastic Paraplegia. There were no sensory phenomena. Babinski's sign was well marked in one patient, while the other had incipient bulbar symptoms and showed a tendency when walking to stagger to one side. This appeared to be of possible interest in view of the statement which had been made that in such cases the sclerotic changes were not confined to the lateral column but affected the ascending and descending cerebellar tracts.—Dr. Griffith also commented on a case of Infective Endocarditis in which the lesion was confined to the Pulmonary Valve. This presented a large fungating mass almost completely occluding the orifice and leading to aneurysmal dilatation of the left wall of the artery. The primary lesion was probably an acute pleurisy with scanty formation of pus which had come on with great suddenness. There was practically a total absence of the interauricular septum and as previously to the occlusion of the pulmonary artery by the endocarditic granulations the flow of the blood was probably from the left auricle to the right the pleura would in consequence of this septal deficiency be placed more certainly within the gathering ground of the right ventricle and the valves of the right side of the heart exposed to greater risk of infection.—Mr. A. L. Whitehead, Dr. A. G. Barrs, Dr. E. F. Trevelyan, Dr. A. S. F. Grünbaum, Dr. B. Pierce, and Dr. Allan discussed the papers.—Dr. Griffith replied.—Mr. Whitehead read a paper on Nasal Disease as a Cause of Headache. The various conditions of the nose giving rise to headache were mentioned, the differential diagnosis was indicated, and the following conclusions were arrived at: (1) Headache was rarely if ever caused by any disease or deformity of the nose which did not give rise to discharge or obstruction to normal nasal respiration; (2) in all cases of persistent headache the nose should be as carefully examined as the urine, the teeth, and the eyes, since in some instances the nasal symptoms might be ignored by the patient; (3) suppuration in the nose and obstruction to nasal respiration, constant or intermittent, must be thoroughly treated; (4) small spurs, deviations, and hypertrophies not causing obstruction should be left alone; and (5) if the middle turbinate bone was enlarged and pressing upon the septum, and other causes of headache could be excluded, partial or complete removal should be advised, since in many such cases complete relief was given.—Dr. Trevelyan, Dr. Grünbaum, and Dr. Bronner discussed the paper and Mr. Whitehead replied.—Dr. J. B. Hellier showed a Uterine Cystic Myoma weighing 12½ pounds.—Mr. E. H. Hackett showed a case of Congenital Buphthalmos.—Mr. Whitehead exhibited a Skiagram of a Piece of Steel in the Vitreous; also the steel which was removed by the giant magnet.—Dr. Trevelyan showed: (1) Two cases of Epilepsy treated by trephining; (2) a specimen of Acute Tuberculosis limited to one pleura, from a fatal case of alcoholic paralysis; and (3) a Small Concretion coughed up by a patient with pulmonary and laryngeal tuberculosis and in whom the condition seemed to be healing.—Dr. L. A. Rowden showed: (1) a case of Lupus Erythematosus under treatment with the x rays with marked improvement; (2) a case of Lupus Vulgaris under treatment with the x rays; (3) Hyperæmia of the Hands and Face (? diagnosis); and (4) some more X-ray Graphs.—Dr. Grünbaum showed a specimen of Heterotype Mitosis in the Ovary.—Mr. B. G. A. Moynihan showed: (1) Specimens from several cases of Colectomy and Proctectomy; and (2) some New Surgical Instruments.—Dr. Allan exhibited: (1) a Humerus showing the supra-condyloid process; (2) a Heart showing Pericarditis (Tuberculous); (3) a Dilated Aorta from a syphilitic subject; (4) an Old Hæmatocele; (5) a Urethral Calculus; and (6) Granular Contracted Kidneys.—Mr. H. Littlewood showed:

ise of Complete
f. Telling showed
Synovitis in a
Monoplegia.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held in the School of Medicine, Dundee, on Dec. 8th, Dr. William Kinnear being in the chair.—Mr. D. M. Greig showed a boy, aged three and a half years, with Double Rachitic Coxa Vara. Though presenting few signs of rickets other than slight thickening at the wrists, beading of the ribs, and prominent abdomen, the changes in the trochanters were well marked. The chief points demonstrated were an abnormal amount of flexion at the hips, with limited extension and abduction, and great increase of adduction. He sat always in the sartorial position, and when laid flat extension of the limbs caused arching of the back. When extension was complete the patellæ looked outwards and even slightly backwards. Any attempt at abduction caused the pelvis to be tilted. The amount of adduction and flexion was so great that his legs could be bent behind his back and his feet brought round his neck. A foot could also be easily put into the axilla of the opposite side.—Dr. G. W. Miller, Professor David MacEwan, Professor J. A. C. Kynoch, and Professor L. R. Sutherland exhibited a variety of other cases and specimens.—Dr. J. Maclle read a paper on the Utility and Futility of Sanatoriums. The paper was based upon the treatment of 500 cases in sanatoriums, with special reference to the sanatorium at Auchterhouse which was the only one of its kind in Scotland where poor and middle-class patients could be treated for a moderate charge, £2 2s. per week being the maximum. He was convinced that more cases of pulmonary tuberculosis could be cured by sanatorium treatment than in any other way. Open-air treatment alone was not sufficient but very careful regulation of diet, exercise, and sleep under constant supervision was necessary and it was not possible to have this in patients' homes. The most essential thing was to get the cases in the early stages. His experience of the treatment of poor patients was most disappointing, as in every case they relapsed on returning home. This arose firstly from too short a stay in the sanatorium and secondly from want of supervision on their return home and lack of means to maintain themselves. The results of treatment of the middle classes were more satisfactory, as they were able to continue the treatment at home and in most cases a permanent recovery was possible. Sanatoriums for the poor in order to effect permanent results, required: (1) machinery to collect and to select suitable cases; (2) endowments so that patients could be kept until beyond danger of retrogression; and (3) extramural workers to look after the houses and families of the patients during treatment. He considered overfeeding essential to recovery. Patients must be induced to eat at least 50 per cent. more food than a healthy person would require under similar surroundings. In sanatoriums the larger the windows the better and in the bedrooms the bed could not be too near the window, so that a full, free draught of air could play across the patient's face. Any climate was good except a relaxing one; sunshine was not essential for success in treatment.—The Secretary read a paper contributed by Dr. A. R
s, experience of the treatment
anatoriums. During 17 years
cases of phthisis were under
, all of which except one were
in 1897 a very bad case of phthisis was admitted which was responsible for the development of the disease in six other patients. It was then decided to build special sanatoriums for the treatment of phthisical patients and the results had been most satisfactory and encouraging. Dr. Urquhart did not consider that the use of tuberculin as an aid to diagnosis in asylum practice was warrantable.—Dr. J. S. Y. Rogers gave an account of his experience of the open-air treatment at Davos Platz, in Switzerland, where the patients were allowed to take plenty of exercise (except in cases of hæmoptysis) and to eat plenty of butcher's meat. He discussed open-air treatment in patients' houses and said that one great fault was having too much furniture in the rooms.—Mr. D. M. Greig, Dr. G. W. Miller, Mr. George Halley, and others also took part in the discussion.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL
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esident,
Wells)
read a paper entitled "Observations on the Climate and Health Resorts of Scotland." Mr. Forbes, in advocating the claims of the health resorts of Scotland, first sketched in outline the characters of the insular climate of Great Britain, dealing subsequently in detail with the general climate of North Britain and especially dwelling on the great influence of the Atlantic Ocean on the west coast both as regards sea and air temperatures as well as rainfall; he then described the geological structure and land formation of the three great natural divisions of the country—i.e., the Highlands, the Central Lowlands, and the Southern Uplands—followed by some interesting notes from the last issued report of the Registrar-General for Scotland on weather and its influence on mortality, concluding his essay by an estimate of such health-restoring localities as Braemar, Kingussie, Nairn, Forres, Strathpeffer, Blair-Atholl, Pitlochry, the Trossachs district, Crieff, Moffatt, Bridge-of-Allan, Rothesay, Oban, Comrie, and several other such watering places.—Dr. R. Fortescue Fox (Strathpeffer) called attention to the medical value of the climate of the north-east of Scotland—the high ground and sea coast from the Dee to Dornoch. It was of special value for neurasthenia and the disorders of middle life. The cool summers with longer days, the pure air, and the richness of solar radiation were chief elements in the Scottish climate. The closure of the Ben Nevis Observatory was a serious loss to climatology.—Dr. E. Symes-Thompson showed that the antiquity of the geological formation in Scotland accounted for the fact that the mountain ranges were lower than those of the Alps or the Pyrenees. Many of the Scotch mountains had lost by denudation some 10,000 or 12,000 feet of elevation.—Mr. Ward Humphreys (Falmouth) questioned the wisdom of always estimating the value of health resorts merely from the point of view of isotherms and isobars, because he thought that mere temperature as recorded by the thermometer and barometric readings were not always safe guides in matters of health, for there was a something in sunshine which affected the
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Mr.
hope
of the book issued by the Royal Medical and Chirurgical Society Scotland should find a place.—Dr. Leonard L. B. Williams said that the amount of the ground covered by the paper was so large that it was impossible to form any estimate of it from the mere hearing but he had no doubt that it would prove a valuable contribution to their knowledge of the climate and health resorts north of the Tweed.—Dr. W. Black Jones (Llangammarch Wells) said that the
coast was also higher than that on the latter and as heat was liberated by condensation of the clouds a portion of this rise in temperature would be due to this cause. The mean annual temperature of Ireland was raised two degrees by the heavy rainfall in that country and it would be interesting to know if any similar estimate had been made in the case of Scotland.—Dr. W. Moxon (Matlock) considered that the British Isles possessed all kinds of climates suitable for all kinds of persons and for all seasons of the year. The chief reasons why a continuous migration to the continent went on of those in search of health were the difficulties of access to British health resorts and the want of enterprise on the part of municipal
suggested that some me
public with the virtues of
undertaken by the society.—

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held at the Medical Institute, Birmingham, on Dec. 7th, Dr. E. W. Wood White, the President, being in the chair.—Dr. Walter R. Jordan showed a case of Congenital Hypertrophy of the Limbs in a child, aged two years. The mother had noticed, when the child was three weeks old, that the left arm was larger than the right and two weeks later that the right leg was larger than the left. The child had never been ill and was well developed. The affected limbs were much enlarged, the increase being apparently in the subcutaneous tissue. There was no pitting on pressure. A skiagram showed no trace of enlargement of bone. The right buttock and the right side of the vulva shared in the hypertrophy. Dr. Jordan remarked that there were several cases on record of this "giant growth" in the upper and lower limbs of the same side—hemi-hypertrophy—

and of one limb only; but he had not found any record of "crossed" hypertrophy.—Dr. O. J. Kauffmann showed two specimens of Cerebral Tumour and one of Cerebral Compression.—Mr. A. W. Nuthall showed a specimen of Double Hydronephrosis, Dilated Ureters, and Hypertrophy of the Bladder, due to a large vesical calculus, taken from a boy, aged eight years, who presented no symptoms till 36 hours before death when he had a rigor, death subsequently occurring from uræmia.—Mr. Nuthall also showed a specimen consisting of the Bladder and Kidneys with large Branched Calculi in the Pelvis of each Kidney, the right kidney being markedly hydronephrotic and the left pyonephrotic. Dilatation of the ureters and chronic cystitis were present. The patient was a girl, aged 11 years, who had suffered from pain in the back and loins for four years and in whom hæmaturia developed seven weeks before death. Great pain was present for three days before death.—Dr. T. Stacey Wilson read a paper on the Successful Treatment of Aneurysm by Iodide of Potassium.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 13th.—Mr. C. F. M. Althorp showed: (1) A case of Gastric Perforation; (2) a case of Hydatid of the Liver, subphrenic abscess, empyema; and (3) a case of Gastric Perforation, subphrenic abscess, empyema.—Dr. R. H. Crowley showed: (1) A case of Scleroderma; (2) a case of Splenomegaly; and (3) a case of Omental New Growth.—Dr. A. Bronner showed: (1) a case of Cerebral Tumour with intense Papillitis and Normal Vision; (2) a case of Disease of the Frontal Sinus simulating Orbital Cyst; (3) a Piece of Steel removed from the Vitreous by the Giant Magnet; and (4) a case of Mastoid Disease in an Infant with Facial Paralysis simulating Parotitis.—Mr. J. Basil Hall showed a case of Paralysis following Dislocation of the Humerus.—Dr. Little showed some Eye and other cases.—Mr. W. H. Horrocks showed: (1) Two cases of Elephantiasis of the Leg treated by ligature of the external iliac artery; and (2) a case of Tumour of the Jaw.—Dr. T. Jason Wood showed: (1) a case of Popliteal Aneurysm treated by excision of the sac; (2) a case of Sarcoma of the Head treated by the x rays; (3) a patient after Amputation of the Arm and Scapula; and (4) a case of Resection of the Rectum, ten months after.—Mr. Ward Smith exhibited some cases treated by the x rays.—Mr. B. H. Slater showed: (1) a case of Lupus of the Face cured by thyroid extract; (2) a patient 20 months after Complete Excision of the Tongue for Epithelioma; (3) a case of "Precancerous Stage" of the Tongue; (4) a case of Intestinal Obstruction after Appendectomy; and (5) a case of Excision of the Lower Lip for Epithelioma.—Dr. Mitchell showed two cases of Xeroderma.—Dr. Oliver showed a case of Xerosis of the Conjunctiva.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—A meeting of this society was held on Dec. 12th, Professor R. Muir, the President, being in the chair.—Dr. A. N. McGregor showed a large Ovarian Cyst torsion of the pedicle of which had given rise to symptoms simulating rupture of an extra-uterine pregnancy. The patient gave a history which indicated pregnancy of four months' duration and at the operation the uterus was found to be correspondingly enlarged.—Mr. A. E. Maylard showed a case of Cervical Fistula communicating with the pharynx. In its formation it simulated the opening of a tuberculous abscess, but on examination it was found that the finger readily passed into the pharynx. Neither food nor fluid taken by the mouth escaped from the sinus. Mr. Maylard regarded it as most probably a branchial fistula.—Dr. James A. Adams showed a boy in whom Excision of Half of the Lower Jaw was performed on account of a tumour of about the size of a duck's egg, which had distended the whole ramus on the right side.—Dr. J. Crawford Renton showed two Enlarged Prostates removed by the suprapubic method.—Dr. Henry Rutherfurd showed a Tumour of the Cæcum the clinical course of which had simulated appendicitis. The patient was now doing well.

ROYAL MEDICAL SOCIETY OF EDINBURGH.—A meeting of this society was held on Dec. 9th.—Dr. R. W. Johnstone delivered his presidential address on the Aspects and Treatment of Criminology. He defined a crime as an offence against the laws of society and after dividing criminals into a habitual and an occasional class he discussed the mental derangement of the habitual group, stating that alcoholism was not the cause of this but rather its result. He next treated the question of the effects of environment and touched upon those of inheritance and finally, having described the anatomy of the habitual class, he concluded with some suggestions as to their treatment.—Dr. C. J. Shaw proposed, and Dr. J. E. Kirkness seconded, a hearty vote of thanks.—Mr. A. W. Neil then read a dissertation on Appendicitis. He first discussed the histology and pathology of the appendix and then, after going into the various theories as to the causation of appendicitis, he treated of the various extensions and complications which might arise and went into the problems which arose in diagnosing the condition. He concluded by a review of the various lines of treatment, rather leaning to the American views.—Dr. D. C. L. Fitzwilliams proposed, and Mr. T. B. Johnston seconded, a hearty vote of thanks."

Reviews and Notices of Books.

Text-book of Human Physiology, including Histology and Microscopical Anatomy, with Special Reference to the Practice of Medicine. By Dr. L. LANDOIS. Tenth edition, edited by A. P. BRUBAKER, Philadelphia, and translated by A. A. ESHNER, Philadelphia. With 394 illustrations. London: Charles Griffin and Co., Limited. 1904. Pp. 1027.

THIS work is a translation without additions from the last German edition which was written some time before the death of Professor Landois. The English version by Dr. W. Stirling has been out of print for some years. We are glad once again to see a new edition of this text-book, for there is no other work of its kind in the English language which deals with the normal physiological processes so as to show where the physiological merges into the pathological, and how the facts of pathology are to be explained by, and how they are in reality of the same essence as, those of physiology. Physiology and pathology are only two variations of the same processes. Above all the book will be useful to practitioners of medicine and to clinicians, while students reading for the higher examinations will find it a trustworthy guide to the fundamental facts of physiology and histology and an encyclopædia of reference as well as an exposition of the latest discoveries and theories of physiology. Moreover, it contains admirably terse summaries of the historical development of each subject and likewise a summary of the comparative physiology of the animal kingdom. This short introduction will serve to show how wide is the scope of the subject and how it is treated from all points of view that can be useful alike to the practitioner, the student, and, to a less degree, to the historian.

Dealing with the present edition it is substantially on the same lines as the earliest published with the latest information added to keep the work abreast of advances in the several sections. Perhaps it is because the subject of leucocytes is so thoroughly discussed in works on clinical diagnosis that less account relatively is given of their varieties and importance in disease. We should like to have seen introduced an account of the hæmometric and other blood methods which are extensively used in this country.

The account of the coronary circulation and the experiments on the cause of cardiac rhythm and on perfusion of the excised mammalian heart are fuller and more complete than is usually the case in English text-books. We do not find the terms introduced by Engelmann of Berlin to designate the action on the heart of the various nerve fibres that occur in the vagus, although Engelmann's views of the conduction of impulses by the muscular tissue as against the neurogenic theory are given in detail (p. 118). The pulse and all that belongs to it are specially and fully dealt with, for this was one of the subjects to which Professor Landois devoted much attention and to which he contributed much original matter. In no text-book are the story, causes, and

uses of the cardio pneumatic movement so fully set forth A description of the sphygmometers used in this country might with advantage have been given.

We find no very material changes in the succinct chapter on Respiration An excellent figure of the change in position of the diaphragm and ribs during the respiratory movements is introduced The same may be said with regard to the chapter on Digestion and many subsequent sections More might have been said on the movements of the intestines and of the researches of Pawlow An occasional disregard of accuracy as to proper names is shown in "Eakins" for Eddins (p 299) The word casein is not used in the sense usually attached to this word in some recent physiological works In this work casein is used where caseinogen should be used Again, we do not find in the index a reference to 'secretin,' nor, so far as we could discover, is this question dealt with in the text Reference to "erepsin" is wanting Possibly the editor and translator wished to give the work as Professor Landois produced it

The section on Heat is compact and yet sufficiently full, both on the physical and physiological aspect of the subject, while it links up the question of normal temperature with variations from the normal and deals with temperature in the animal creation, thus treating this important and fundamental subject in the true, broad, catholic and only profitable way

It is in the sections relating to the nervous system that most change or at least most novelty was to be expected The question of the "neuron" as the physiological unit is stated and compared with the more recent view which rejects the neuron as the physiological unit and which sets forth the fibrillary substance or the neuropile as the medium of nervous activity Bethe affirms that reflex activity persists in crabs even after the ganglion cells have been extirpated If this be true the neuron thus loses its significance in the physiological sense and also from the histological standpoint The section on the Sympathetic Nervous System, which occupies a little over three pages might have been expanded The subject is, however, treated tersely The record of the functions of the cerebellum is condensed within one and a half pages Perhaps it is better to state what is definite, or stated to be definite and assured, than to give a dissertation that will require the efforts of many succeeding recorders to obliterate Better far a recording angel dropping a tear and blotting out the evil and inaccurate records that should never have found a place on the printed page than the free admission of all sorts of statements on insufficient evidence into the pages of a work which has established its place in the hierarchy of acknowledged text books We must demur to the sweeping statement that to Holmgren "belongs the credit of having shown the necessity for examining all railroad officials and all pilots as to the trustworthiness of their color sense For Holmgren should be read George Wilson of Edinburgh, who was one of nature's nobility For an all round view of the facts of physiology as applied to medicine this work is still unrivalled

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Surgical Anatomy of the Head and Neck By JOHN B DEAVER, M D, Surgeon in Chief to the German Hospital, Philadelphia Illustrated by 177 plates, nearly all drawn from original dissections Neck Mouth, Pharynx Larynx Nose, Orbit, Eyeball, Organ of Hearing, Brain, Back of Neck, Cranium, Scalp, Face London Rebman, Limited 1904 Pp 770 Price £2 12s 6d net

WE have already reviewed in these columns and at considerable length the sumptuously got up and lengthy treatise on Surgical Anatomy by Dr Deaver, the surgeon in chief to the German Hospital, Philadelphia An additional volume, entitled "Surgical Anatomy of the Head and Neck," has now been issued separately by the same author The volume has been made up by bringing together those sections of the original treatise which appeal chiefly to specialists in diseases of the ear, eye, nose, mouth, throat, and central nervous system A very judicious selection of matter and illustrations from the original volumes has been made, the result being a well indexed volume of 770 pages with 177 full page illustrations In the letterpress we still find those minute directions for dissection which we previously adversely criticised We cannot admit that such directions for dissection are called for in a treatise on applied anatomy, they properly belong to anatomy as systematically taught The anatomical details given in the book are correct enough so far as they go but in many instances they seem to fall short of the correctness of detail and minute accuracy which are needful in dealing with the eye, ear, and central nervous system *from a medical and also from a surgical point of view* For instance, the distribution of the arteries of the brain is not indicated with that accuracy which neurology is entitled to demand The impression carried away after reading the account of the distribution of the cortical branches of the middle cerebral artery is that they supply motor cortex only, their important sensory distribution is not insisted upon Similarly we find no hint of the important relation of the posterior cerebral artery to the visual cortex The same lack of important detail characterises the descriptions of the cranial nerves Again, some of the most important relations of the air sinuses of the skull receive scant attention while others are not mentioned at all The relations of the optic tract to the geniculate bodies are incorrectly depicted in the diagram opposite p 462

Most of the illustrations have been drawn directly from actual dissections made for the purpose and we have previously expressed our admiration of the way in which they have been reproduced As an example of their faithfulness to nature it is of interest to compare the brachial plexus represented in Plate XXXI with Dr Deaver's description on p 148 A well known English anatomical text book is guilty of the same incongruity The general impression left on renewing our acquaintance with Dr Deaver's work in this new form is one of disappointment The first favourable impression caused by the size, importance, and profuse illustration of the work is spoiled by the discovery of this lack of attention to minute details—details which have such important practical bearings In a book of size and pretension such as this is we are justified in expecting attention to important minutiæ such as we have indicated

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Bacteriology and the Public Health By GEORGE NEWMAN, M D F R S Edin, D P H Cantab, formerly Demonstrator of Bacteriology in King's College, London, Medical Officer of Health of the Metropolitan Borough of Finsbury Third edition Illustrated London John Murray 1904 Pp 497 Price 21s

THIS work in its first edition formed a volume of the Progressive Science Series and was a comparatively small book entitled 'Bacteria' This edition was reviewed in THE LANCET of Nov 25th, 1899, p 1448, and it was recognised that the great difficulty of writing a book on such a subject in popular form without too much technical detail had been successfully overcome A further improved edition was reviewed in 1900 The present issue is nominally a third edition of this work but it has grown into a large volume with a changed title, though the arrangement of the subject matter remains the same it has been so far altered and rewritten that it is practically a new book The subject is now avowedly regarded in its relation to the problems of public health and the popular character of the work has to a very large extent disappeared

The first important section treats of bacteria in water

higher officials is enormously increased and their standing lowered in the eyes of their subordinates." The above are some illustrations of the manner in which the executive authority is stated by our contemporary to be usurped by the asylum committee. But a still graver indictment is preferred against this body. There is, it would seem, a power behind the throne in the shape of the clerk to the visitors, a *deus ex machinâ*, to whom the various officials are apt to appeal and "who, in course of time, will probably govern both the asylums and the committees." Here, then, we find drawn a picture of a series of great public institutions of which the medical superintendents are described as mere nominal heads, the executive power, apart from the legislative, which, of course, is properly theirs, being gathered largely into the hands of the governing body and tending to gravitate more and more into those of a permanent, non-resident official who knows, and can know, nothing of the practical working of these institutions. These are matters which affect the public as well as the profession. The London County Council, as a representative body, cannot ignore these serious charges which in the public interest demand prompt and most careful investigation.

The Use, Abuse, and Exclusion of the Colon.

So long ago as 1814 that well abused but distinguished man Sir EVERARD HOME in his lectures on comparative anatomy recorded some interesting experiments and observations on the functions of the colon. He found that if he swallowed a full dose of tincture of rhubarb it appeared in his urine for an hour afterwards. It then disappeared for two or three hours and then appeared again. From this experiment he argued that a rapid absorption occurred in the upper and lower part of the alimentary canal and he thought it probable that the sites of this absorption were the stomach and the cæcum, between which he believed there existed an evident relationship. He pointed out that in animals such as the ruminants in which the stomach was large the cæcum was small, whereas in herbivora as the horse and the rabbit in which the stomach was small the cæcum was gigantic. From this and other evidence he inferred that the cæcum possessed important digestive functions which were developed inversely as those of the stomach. HOME also made a most interesting observation on the great intestine of ducks, for he found that a considerable quantity of fat could be extracted from the contents of their cæca but that by the time these contents had reached the lower colon all fat had disappeared. In the years that followed very little more was done to elucidate the part played in the economy by the colon. It was, indeed, recognised from the work of comparative anatomists that in herbivora the cæcum played a most important part in the digestion of cellulose and it was recognised that the products of this digestion must be absorbed in the colon below, but observation ceased at this point.

During the last few years the activity of surgery in connexion with the appendix has caused a great revival of interest in the functions of the colon and valuable original work in this field has been done quite recently by Dr. W. D. CANNON,[1] Dr. E. BARCLAY-SMITH,[2] Dr. ARTHUR KEITH,[3] and Mr. T. R. ELLIOTT.[4] Finally, Sir WILLIAM MACEWEN summarised our knowledge of this subject and added to it in the recent Huxley lecture.[5] Some of his direct observations of the cæcum, the ileo-cæcal orifice, and the orifice of the appendix in a man whose cæcum had been laid bare by an explosion were of extreme interest. He was able to observe clear thick alkaline fluid pouring from the appendix and cæcal glands just before the ileo-cæcal valve opened and the ileum discharged its acid contents. It is probable that a reflex action excited by acid from the cæcal mucous membrane closes the valve, as PAWLOW has shown is the case in the duodenum, so that the contents are never more than neutral. When this reflex failed to act the ileo-cæcal valve flooded the cæcum with acid fluids which digested the skin around and from this it may be inferred that a normal function of the colon is to destroy these ferments and to neutralise the acidity of the chyme. Sir WILLIAM MACEWEN also suggested that one of the chief functions of the appendix might be to cultivate an attenuated strain of bacillus coli and to inoculate each charge of pabulum as it entered the cæcum, the attenuation of the micro-organism being probably connected with its lymphoid tissue. Such a brief summary of some recent additions to our knowledge of the functions of the colon is enough to show that these are most important even in man. Our knowledge, however, is at present too incomplete to enable us to explain how these functions become disordered and to state the definite causes which lead to constipation and atony of the colon. It seems reasonable to suppose that diet and the manner of feeding and exercise are at fault. Thus a colon constructed to digest coarse food and to remove cellulose casings from starch granules and to be stimulated to vigorous contractions by the constant kneading of the neighbouring abdominal wall, will readily become relaxed, distended, flaccid, and filled with decomposing refuse of food when everything that it was formed to digest is carefully excluded from the diet; in short when food is reduced to the condition of pap and is swallowed in haste and without appetite the colon is not even stimulated to expel its irritating contents by regular and vigorous contraction of the abdominal wall. Whatever may be the causes it is certain that an increasing number of town dwellers suffer from constipation and atony of the colon and that purgatives, enemata, and massage are powerless to prevent their progress from constipation to coprostasis. As the condition advances the patient is poisoned by the decomposing stagnant contents of the colon, though the extent to which the constitutional symptoms may progress is the subject of debate. It is said by some that the red corpuscles are destroyed, so that the face becomes pale and pigmented upon the forehead and below the eyes; that the victim is languid, irritable, and without energy; and that, finally, wasting sets in and loss of fat is well marked. The colon itself undergoes definite organic changes and solid fæcal masses appear in the transverse colon and even the

1 American Journal of Physiology, vol. vi., 1903, p. 251.
2 Proceedings of the Cambridge Philosophical Society, vol. xii., part 1, 1903.
3 Journal of Anatomy and Physiology, January, 1904.
4 Journal of Physiology, vol. xxxi., May 3rd, 1904.
5 THE LANCET, Oct. 8th, 1904, p. 995.

caecum, where only fluid contents should be found, and these masses lead to stercoral ulceration and attacks of diarrhœa or even to acute ulcerative colitis. The distended caecum may certainly compress the rectum, especially when the patient strains during difficult defecation, and adhesive peritonitis may bind down and fix the displaced colon and constrict its lumen. Long before this last stage is reached a return to health is obviously impossible and an advanced school of modern surgery holds that the patient is better without such a diseased colon. It is in these circumstances that surgery has stepped in to relieve a condition which up to recent times has been regarded as entirely in the domain of medicine. The ileum is divided some distance from the caecum and the distal portion is closed. The proximal portion of the ileum is then sutured to the colon at some convenient point on the far side of the obstruction which it is desired to "short-circuit," and in this way the peccant portion of intestine is excluded.

This method has usually been employed for inoperable carcinoma of the upper part of the colon. It has, we believe, been used several times for congenital idiopathic dilatation of the colon (Hirschsprung's disease) which produces similar constipation in children to that which we have described in adults. In October, 1900, Mr. C. W. MANSELL MOULLIN performed ileo-colostomy in a case of obstinate constipation of seven years' duration due to atony of the colon following colitis. He did not divide the ileum beyond the anastomosis. His patient, we are informed, has had no return of the chronic constipation.[6] On the other hand, Sir WILLIAM MACEWEN found that a patient from whom he had removed the termination of the ileum, ileo-cæcal valve, caecum, and part of the ascending colon, suffered from irregular and unexplained attacks of diarrhœa and required to be dieted carefully and never regained his normal standard of health. It is, however, to Mr. W. ARBUTHNOT LANE that the credit is due of definitely carrying out the treatment of cases of chronic intractable constipation such as we have described by exclusion of the colon from the alimentary tract.[7] The fundamental theory of Mr. ARBUTHNOT LANE'S work is that when the colon has been so abused and misused that there is no hope of leading it back to the paths of healthy function—when such organic changes are already established that the normal structure can never be regained—the suffering patient is better without the use of this diseased organ which can with slight risk and with great benefit be excluded from the alimentary canal. His views are not universally accepted, one distinguished physician being, indeed, categorically opposed to them. This fact makes it difficult to be quite certain in what cases operative action is really necessary even while acknowledging the skill and success that have marked Mr. LANE'S procedure. When the hopeless plight has been reached any remedy that is both practical and to some extent successful has claims on our respectful attention. We believe, however, that the time will come when physiology, anatomy, and bacteriology will supply us with such certain and detailed knowledge of the function of the great gut that the physician will be able to prescribe a diet and healthy conduct of life that will keep the colon busily occupied in the performance of its normal functions and prevent it from acting as a stagnant pool in the moving stream of the alimentary canal. In medicine, as in all other things, prevention is better than cure.

[6] Transactions of the Medical Society of London, vol. xxiv., p. 193.
[7] THE LANCET, Dec. 17th, 1904, p. 1695.

Annotations.

"Ne quid nimis."

CHRISTMAS FARE.

THE choice of a flesh food at the Christmas festival seems to lie now between beef and turkey (for no one hears of a leg of mutton, for example, being on the Christmas table) and it is interesting to compare their respective physiological merits. First, it may be said that weight for weight the flesh of the turkey is more nourishing than that of beef but the latter is, generally speaking, cheaper than the former. The moisture in beef, however, exceeds the amount present in the flesh of the turkey and the latter contains a better percentage of proteid or flesh-forming substance. In either case the percentage of moisture is seldom less than 70 per cent. In lean beef the amount of fat is much the same as in a not too well-fed turkey but it must be pointed out that the flesh of poultry differs from that of beef or mutton in not having its muscular fibres permeated by fat and, moreover, the fibres in the flesh of the fowl are short and readily yield to the disintegrating action of the digestive processes. A large amount of fat in either case is apt to interfere with the digestibility of the meat. The fat of beef is more digestible than the fat of the turkey. The fat of birds, in fact, is harder and owing to its tendency to become rancid is unsuitable for the dyspeptic patient. Perhaps the most important difference, however, from a dietetic point of view between beef and turkey is that whereas beef contains a high percentage of extractive matters turkey contains hardly any at all. The extractive matters in beef account largely for its peculiar and marked flavour and owing to their absence in poultry generally and in the pheasant and partridge the flavour of these meats is delicate. But there is no doubt that the extractives of beef as well as of mutton are valuable, for not only are they flavouring agents but they also act as, perhaps, the most powerful stimulants to gastric digestion. They excite the appetite and aid the digestion of the food in which they occur or with which they may be taken. Consequently, the absence of extractives in certain kinds of food frequently gives a feeling of fulness when they are ingested. They are "filling" as it is said According to these facts the moderate use of a stimulant to promote digestion would be more justified in the case of delicately flavoured foods, as fowl, turkey, and so on, which contain only a small proportion of extractives, than in the case of richly flavoured foods as beef or duck or goose. Physiologically it is quite inadmissible to drink a heavy highly stimulating wine with a juicy beef steak; on the contrary, with the dry meats which contain a small proportion of appetising extractives a glass of wine is acceptable. In the former case it would be adding one stimulant to another but in the latter a missing quality would be supplied. Few people, however, are guided in the choice of food by any question of its more or less nutritive quality, though it is interesting to observe that instinctively they make up a physiological balance where such is scientifically shown to be needed. Thus, the lack of fat in bread is compensated by adding butter to it, the excess of fat in meat is balanced by the excess of carbohydrate or starch in the potato, and even

with turkey, which analysis shows to be free from appetising extractives, an adjunct is often found in the savoury stuffing or sausage meat. Such an adjunct would be obviously quite superfluous, as it would be distasteful, in beef. Instinct and science evidently go hand in hand in these matters.

THE STERILISATION OF DEGENERATES.

AT a recent meeting of the Medico-Legal Society held at the rooms of the Royal Asiatic Society, Sir William Collins being in the chair, a discussion took place initiated by a paper read by Dr. Robert R. Rentoul upon Degeneration, its Causes and Prevention, with reference to the Proposed Sterilisation of Certain Degenerates. In advocating a proposal that all persons likely to bring into the world a degenerate offspring should be rendered by surgical operation incapable of reproducing their species, Dr. Rentoul was not content with the discussion of principles or with indicating in outline the manner in which legal effect might be given to his views. He explained in detail the operations which he desired to see enforced, illustrating them with diagrams hung upon the walls, and laid before his audience the comparative merits of orchotomy, vasectomy, oöphorectomy, and salpingotomy as means for rendering the union of idiots, syphilitic persons, drunkards, criminals, and other undesirable citizens unfertile. He enforced his views by formidable but unconvincing tables of figures in which prostitutes appeared to be included among "degenerates," and, indeed, from the very beginning the debate was bound to be of an unpractical nature as no two people mean the same thing by the much abused adjective—degenerate. We need not discuss surgical details with regard to which, as Sir William Collins hinted, there might be room for disagreement with the lecturer, nor need we express opinions as to the proportion of cases in which "degeneracy" is due to other than hereditary causes. However freely we admit that in the interest of the community persons mentally or physically at fault should as far as possible be prevented from breeding children who in all probability will inherit their defects, we are still some way from the conclusion that to subject all of these by law to deprivation of their generative organs would be either morally justifiable or politically practicable. In the interest of the community it might well be considered desirable that many of its members should cease to live at all but we do not consider ourselves morally justified in taking their lives for this reason only. With regard to the practical possibility of the measures advocated by Dr. Rentoul, we have only to consider that the trifling protective operation of vaccination has not yet been made universally compulsory in order to appreciate the difficulty that Parliament would find in sanctioning what he recommends. Nor need medical practitioners altogether regret this. As one of the speakers at the meeting of the Medico-Legal Society pointed out, the decision as to who were to be certified as fit subjects for sterilisation would rest with the medical profession. The anxiety and responsibility attaching to the certification of persons of unsound mind are very considerable but lunatics are only placed, perhaps temporarily, in confinement and if after recovery they show resentment for what has been done for them they have not a permanent physical mutilation upon which to base a claim for sympathy and compensation. The results of the birth of children from the union of parents who are physically or mentally below the ordinary standards may be deplorable but the avoidance of it by enforced surgical interference cannot be regarded as justifiable until all other means of attaining the same end have been attempted. Such births constitute but one of the effects of unwholesome and unnatural conditions of life and to study how we may escape from an evil effect instead of going to the root of the matter and striving to remove the cause is to attempt to obtain temporary and local relief by an unscientific method which in this instance must be regarded as outside the region known as that of "practical politics."

METROPOLITAN STREET AMBULANCE ASSOCIATION.

THE useful association which bears the above name, and to the work of which we have frequently referred, has issued a circular to all the metropolitan Members of Parliament. The circular states that the association has forwarded a pamphlet containing the report of proceedings for the current year and other "collateral matter." It further reminds metropolitan Members of Parliament that the association is a body of considerably over 1000 medical men, most of whom practise in London, and numbers among its members the Presidents of the Royal Colleges and representatives from all the larger hospitals. The object of the association is stated to be the securing with as little delay as possible of an efficient ambulance service for London and the circular concludes with a hope that the metropolitan Members of Parliament will promote this object in the House of Commons and elsewhere. We have many times pointed out the need of an efficient ambulance service for London and so recently as our issue of Nov. 26th we referred to an inquest held by Mr. Troutbeck on a death the circumstances of which were a lurid comment upon the need for such a service. We therefore earnestly hope that the metropolitan Members of Parliament will do their utmost to further the scheme which the association has set on foot.

DR. DOYEN AND THE SEROTHERAPY OF CANCER.

OUR Paris correspondent writes: "Your readers will remember the excitement aroused by the communication of Dr. Doyen made to the recently held Congress of Surgery. After his communication to the Academy of Medicine in February last[1] Dr. Doyen appealed to the Congress of Surgery, asking it to appreciate his work. The Congress declined to adjudicate while admitting the principle formulated by Dr. Doyen and decided that the Pasteur Institute should be asked to inquire into the matter. A committee of the institute was accordingly appointed, composed of Professor Metchnikoff, Dr. Netter, Dr. Variot, Dr. Blondel, and Dr. Gallois. Professor Metchnikoff took to the institute a number of tubes inoculated at Dr. Doyen's clinic with fragments of malignant growths and with this material commenced a series of researches. At the meeting of the Society of Surgery which was held on Dec. 14th Dr. Doyen showed eight patients. Three were old cases of malignant disease who had been operated upon three years, two years, and ten months ago respectively and who had been treated with Dr. Doyen's serum after operation with a view to prevent recurrence. Another inoperable case had been treated to make the tumour operable and operation was performed on Oct. 24th; another patient operated upon 15 months ago by M. Tuffier, in whom recurrence had taken place, had been treated for the recurrence; and, finally, three severe and quite inoperable cases were shown, the patient having submitted themselves to treatment under the guidance of the above-mentioned committee. Dr. Doyen's remarks dealt chiefly with the bacteriological aspect of the question and with the experiments undertaken by Professor Metchnikoff to confirm the existence of the micrococcus neoformans in cancerous growths. The results of these experiments, which were undertaken by Professor Metchnikoff at the Pasteur Institute with the coöperation of his colleagues and which were watched (*suivies*) by M. Roux

[1] THE LANCET, March 12th, 1904, p. 762.

himself, are to establish the fact that the micrococcus neoformans does exist in cancerous tumours exactly as described by Dr. Doyen and that the question is one of a new microbe of the nature of a (*assez analogue au*) polymorphous coccus. Of 121 tubes inoculated 41 have given pure cultures of the microbe of Doyen and Professor Metchnikoff has also found it in cancerous tumours supplied by other surgeons. The same organism has also been found in cancerous growths taken from the lower animals. Experiments are being made to see whether this organism can reproduce malignant growths. As regards the serum its action in all the cases treated thereby in Dr. Doyen's clinic under the eyes of Professor Metchnikoff has been the same. Tumours have diminished in size, thus becoming operable when before they were not so; affected glands have diminished and the skin in the neighbourhood of the growth has changed colour. Professor Metchnikoff allows the correctness of these facts. As to whether the serum can prevent recurrence is a question which cannot be answered for some years. The Society of Surgery, however, has nominated a committee of five members to keep Dr. Doyen's patients under observation and to report to the society thereon."

THE ICE-SUPPLY OF LONDON.

THE questions of the quality and quantity of the ice-supply of London have been dealt with on more than one occasion in THE LANCET and Dr. W. H. Hamer in a report recently published by order of the public health committee of the London County Council, practically endorses what we have said. He agrees that it is undesirable to continue to repose absolute confidence in natural ice in ignorance of the conditions which exist at the harvesting grounds. Having in view, he adds, the nature of the risks involved in consuming natural ice and the demonstrated insufficiency of the supposed safeguarding circumstances, the reasonable course would appear to be to abandon the use of such ice for actual consumption or for purposes in which it is brought into direct contact with foodstuffs. Further, under such conditions ice made from absolutely pure and preferably from distilled water should, he thinks, be used and strict precautions should be taken to insure that such pure ice does not become contaminated subsequently to its manufacture. In the report by ourselves published in THE LANCET of July 29th, 1893, on the character and quality of the ice-supply of London the conclusions amounted to the following, viz.:—1. By far the greater proportion of the ice supplied in London is natural (generally Norwegian). Of the specimens procured only one had been produced artificially and this gave indifferent results on chemical analysis but results of an eminently satisfactory kind in the light of bacteriological inquiry, practically no development of colonies of organisms taking place on culture. 2. Two out of the five specimens of ice imported into this country from Norway, whilst yielding a satisfactory chemical analysis, were decidedly bad according to bacteriological examination. 3. Three out of five other specimens of imported ice, though furnishing no condemnatory evidence on chemical examination, yielded bacteriological results such as to give rise to suspicion. In view of these results THE LANCET report continued: "It is evident that when ice is intended for human consumption preference should be given to that produced by artificial means, but the water used for this purpose may not be satisfactory and we therefore would strongly urge the desirability of using only distilled water for this purpose." The unsatisfactory bacteriological account of the specimens of Norwegian ice is probably due not to the source of the ice but to incidental causes during its transport which Dr. Hamer points out. As regards the records of ice-borne disease he says that the number of instances in which there has been evidence that actual disease has been caused by the consumption of ice is small. He also very properly calls attention to the need of supervision of cold stores. As he remarks, what is needed in the interests of public health is not merely that any unsound food in a cold store should be seized and destroyed but that consideration should be given in originally designing refrigerating premises to questions of structure and arrangement in their bearing on public health, and in order to attain this object it will probably be found necessary to require registration of all such places. The dairy is subject to control by the health authority and so should be the cold store considering its possibilities for evil. Incidentally an interesting observation is made upon the bacteriology of ice. It is that of Professor Abba who concludes that water bacteria are not so much destroyed as extruded from ice in the process of freezing. This conclusion accords with the observation that foreign matter in water is ejected in a similar way during the formation of ice.

INTERMITTENT CLAUDICATION.

INTERMITTENT claudication is a rare local affection, though it occurs in association with a much more common morbid condition—arterio-sclerosis. Described as early as 1856 by Charcot, it attracted little notice until similar cases were published by Leyden (1874) and Erb (1876). An account of the general symptoms and pathology of this affection was published in THE LANCET some years ago.[1] In the *Medical News* of New York of Dec. 3rd Dr. Arthur Patek, assistant professor of medicine, Wisconsin College of Physicians, U.S.A., records an interesting case which throws light upon the pathology and localisation of the morbid changes of intermittent claudication or limping. The patient was a man, aged 73 years, a merchant of active habits, accustomed to drink in moderation, and with a personal history free from syphilis. He had been in fair health till the age of 60 years, when he began to suffer from gastric discomfort and pain after taking food. Recently he has become weaker and liable to moods of listlessness and apathy, though habitually he has been a man of jovial temperament. This is to be correlated, says Dr. Patek, with his advancing age and a slight degree of arterio-sclerosis which is present and can be detected readily. The special localising symptoms which have more recently developed refer to difficulty in walking and occasional limping. Thus, he says, his legs feel heavy and "dragging," and there is at times a considerable degree of weakness in the lower extremities. It frequently happens that when rising from a sitting posture he has to take hold of something to save him from falling. A dizziness frequently comes over him and makes him sway till he overcomes it. "While walking with comparative ease for a few minutes," adds Dr. Patek, "he suddenly experiences a sense of weight and cramplike pain in the legs, then they give way underneath him and he falls on to the pavement." After a few minutes' rest he recovers, rises and goes home. Arcus senilis is present in both eyes, his complexion is sallow and anæmic, and a slight degree of left hemiparesis is evident which is the result of an old attack of hemiplegia. Slight emphysema and bronchitis are present and the urine is at times found to contain albumin and casts. The radial arteries are slightly harder than normal. Pulsation is present in all the main peripheral arteries, including the dorsalis pedis, but is absent in both the posterior tibial arteries at the level of the internal malleolus. The condition present is, concludes Dr. Patek, a marked local arterio-sclerosis of the posterior tibial arteries so that the muscles supplied by them have an insufficient amount of blood to meet the special

[1] THE LANCET, June 22nd, 1901, p. 1773.

calls of metabolism during walking. The slightest contraction of the already sclerosed vessels brings on cramp and sudden loss of muscular power, with inability to walk or even to limp. Hence the significance of the "claudication" or intermittent limping, which is definitely attributable to the local pathological vascular condition. Such a condition should be differentially diagnosed without difficulty from erythromelalgia and Raynaud's disease.

PATHOLOGY AT OXFORD.

THE meeting which we announced in our issue of Dec. 17th as about to be held under the presidency of Sir William Church to consider the question of pathology at Oxford was duly held at 20, Hanover-square, London, W., on Dec. 20th. The meeting, as is frequently and unavoidably the case with meetings of medical men, was somewhat sparsely attended but the outcome of it was that two committees were appointed, the one a standing committee and the other an executive committee, the duty of which should be to bring before the University the interests of medical education at Oxford and more particularly the need for adequate endowment of the department of pathology. The facts of the case stand thus. The sole endowment of the department at present is the sum of £300 per annum allotted by the University Chest for the salary of a Reader in pathology. All the cost of upkeep and of laboratory apparatus and the like has to be found elsewhere. The Rhodes trustees have allotted a sum of £200 a year for five years, so that the whole settled amount at present available for salaries, upkeep, apparatus, and all other expenses is £500 per annum, although to this must be added students' fees which rarely amount to £100 per annum. If Oxford men could raise a sum of £10,000—i.e., a further £300 a year—it might be that the University Chest would see its way to grant more help towards expenses. Oxford medical men constitute, however, a small body, so that it is doubtful whether they alone could raise such a sum. But it is to be hoped that all Oxford men will help. Although the Medical Faculty possesses an excellent teacher of pathology and an admirable laboratory for him to teach in, the lack of money prevents the teacher from giving his whole time to the work and seriously handicaps the opportunities for work which would be forthcoming if funds were in hand.

ITALY AND THE ANGLO-SAXON.

ONE of our Italian correspondents, under date Dec. 18th, writes: "From her Parliamentary institutions to her periodical journalism, the youngest of the European Powers has, much to her own benefit, initiated or adopted many features of British civilisation; indeed, no full-dress debate in her Upper or Lower House or exhaustive discussion of general or imperial interest in her press is regarded as complete without reference to 'Anglo-Saxon' precedent or without appeals to English experience, historical or contemporary. In the medical field we have constant illustrations in point, particularly on that side of it which deals with public hygiene or the 'pathology of collectivism' as it has been called, including under this category the phenomena of religious revivalism or the organised emotional outbursts to which all society is more or less subject. Italy, past and present, has had her full share of these and in the year now closing has been unusually prolific in moral explosions and fanatical demonstrations, from her ill-inspired and abortive 'scioperi generali' (general strikes) to her 'anticlerical protests' culminating in the unseemly violence and outrage of Dec. 8th. In keeping with her close observation of British experience and usage she is now turning her eye from her own internal manifestations to those of the 'Anglo-Saxon' world and in the columns of her most widely read journal, the *Secolo* of Milan, there is placed before her public a vivid account of the 'religious epidemic' now stirring the Welsh Principality from centre to circumference. After a full historical survey of the successive outbursts of 'mania contionabunda' in the British Isles, the article concentrates itself on 'Revivalism in Wales' and drawing upon the recent comments of THE LANCET—'la nota rivista medico-scientifica'—it entertains its readers to concrete illustrations of this 'curioso fenomeno d'isterismo' which must have the effect of crowding the lunatic asylums of the Principality if not of adding to the number of these institutions. There is an undertone of self-congratulation in the article that Italy is not singular in being subject to ecstatic outbreaks on an epidemic scale—recalling in some degree her satisfaction during the South African war at witnessing the almost hysterical emotionalism displayed on the Stock Exchange and other great British centres when the tension of anxiety as to the fate of Kimberley and Mafeking was unexpectedly relieved. 'Even the self-possessed and sedate Anglo-Saxon,' it was said, 'is not proof against such ordeals and can, on occasion, give evidence of what the medico-psychologist terms the "hyperæsthesia of an over-wrought civilisation."' Be this as it may, the 'pathology of collectivism,' whether in the industrial or political world as in Italy or in the religious field as in the British Isles, is well worth the attention of the publicist in either country, and the influential Milanese journal is fulfilling a salutary function in drawing the attention of its readers to the conditions under which such phenomena develop and die out as that 'revivalism in Wales' on which it opportunely 'strengthens its case' by the comments of THE LANCET."

THE PARASITES OF SMALL-POX, VACCINIA, AND VARICELLA.

WE publish in another column an article by Dr. W. E de Korté in which he claims to have discovered an amœboid protozoon in the lymph of variola, vaccinia, and varicella, as well as in the analogous disease, amaas or Kaffir milk-pox. The parasite of vaccinia and variola is described as an amœboid organism about $\frac{1}{2500}$th of an inch in diameter, its protoplasm containing highly refractive greenish particles regarded by Dr. de Korté as spores, which in many cases render the nucleus invisible. On the warm stage in the case of the amœba found in human vaccine lymph there is very active amœboid movement, while in the case of that from small-pox lymph although alteration of contour occurs no pseudopodia have been seen. In glycerinated calf lymph large amœbæ are to be observed which are regarded by Dr. de Korté as encysted forms. The amœbæ can best be studied in hanging-drop preparations of the lymph itself, and since they are very easily destroyed by the manipulative processes required for staining they may not be found in stained preparations, although they are capable of being stained. Dr. de Korté discusses the possibility that the supposed organisms may be leucocytes and negatives it among other reasons because they persist in the lymph for as long as six months, whereas leucocytes in human blister-fluid disappear after 14 days even though kept at the body temperature, which would hardly seem a very cogent reason in the absence of details of the origin of the blister fluid or of information of the duration of life of leucocytes in vaccine or variola lymph. Dr. de Korté states that no multiplication of the amœbæ by direct division and no sexual reproduction have as yet been observed, and then writes that he hopes shortly to publish a paper on a method of cultivating the organisms *in vitro*, statements which are somewhat difficult to reconcile. A protozoon or sporozoon.

has by several observers been described as occurring in the lymph of vaccinia and variola and has been regarded as the *contagium vivum* of these diseases, although the proofs seem in all cases to be incomplete. Quite recently the same claim has been made in reference to scarlet fever. The observations are therefore of interest but it would seem to be wiser to suspend judgment until the further details of the life-history of the organisms promised by Dr. de Korté are published.

CENTENARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE Royal Medical and Chirurgical Society was founded on May 22nd, 1805, and the council has decided to celebrate the centenary year in May next in a manner worthy of the occasion. The following provisional arrangements have been made in order to carry out this intention: there will be a reception by the President of the society at 20, Hanover-square, London, W.; an exhibition will be held of books, prints, instruments, and so on, published or in use at the time of the foundation of the society; a centenary volume will be published giving a narrative history of the society and its work; there will be a festival dinner; and a conversazione, to which ladies will be invited, will take place at the Royal College of Surgeons of England.

THE REPORT OF THE INSPECTOR UNDER THE INEBRIATES ACTS FOR THE YEAR 1903.

THE Inebriates Act scover a period of from 1879 to 1900 but for all practical purposes Governmental dealing with inebriates began with the Inebriates Act of 1898. By this Act reformatories to be established were divided into two classes—namely, State inebriate reformatories and certified inebriate réformatories. The latter are specially conducted for the "reformation of reformable inmates"; the former "have gradually become places for the care and detention of refractory, violent, and weak-minded persons who by their conduct render the work of certified reformatories impossible and who require for their care and control methods which are closely analogous to those associated with the detention of the most violent criminals and lunatics." Of State inebriate reformatories there are two, one at Warwick for males and the other at Aylesbury for females. Of certified inebriate reformatories there were in the year 1903 nine with 677 available beds. In both classes there is a great excess of female patients over males. This is explained by the difference between the way in which the two sexes "take their liquor." Committals to reformatories depend almost entirely upon arrests. In the words of the inspector which he quotes from his report for the year 1901—

> Arrests depend largely upon the amount of insult and obstruction a constable will stand before taking action and more still upon the temperament of the drunken person and the effect alcohol has upon his brain. A drunken woman nearly always becomes hysterical, [illegible]

The inspector is of opinion that practically no sentence under the Acts should be for less than three years. This is not a penal sentence but is given with an object of affording the inebriate a chance of future reformation. The majority of persons, says the inspector, who are sentenced to reformatories would, if left alone, spend most of their time in prison. He quotes the case of a woman who was sentenced in June, 1902, to two years' residence in a reformatory. She was aged 55 years and her police-court record begins in 1868. Of the 34 years between this date and 1902 she spent nearly 23 years in prison and yet, says the report, "we are questioned as to whether three years' detention in a reformatory is justifiable." The whole report is of great interest and should be carefully studied by all medical men and others having the welfare of the community at heart. From the purely medical side it is to be noted that the report says: "Notwithstanding the fact that more than 1000 of the worst drunkards in the country had been admitted to reformatories up to the end of last year we have not been able to record one typical instance of 'cirrhosis of the liver.'"

SIMULTANEOUS APPLICATION OF ELECTRICITY AND MASSAGE.

WE have received from Dr. A. Bobrowa of Smolensky Boulevard, Moscow, a description, partly in English and partly in Russian, of a method of treatment which he has found useful in certain cases. Briefly stated, the method—to which he has given the name of auto-conduction—consists in massage with the simultaneous application of electric currents conveyed through the hand of the operator which is the only electrode employed. Faradic or direct galvanic currents are not used in this way but only high-frequency (Tesla-d'Arsonval) currents. Dr. Bobrowa enumerates the following physiological and therapeutic effects of these currents: (1) they are painless and usually imperceptible, but if very strong they may create a slight feeling of warmth at the points of contact with the electrodes; (2) they cause dilatation of the blood-vessels and lowering of the blood pressure; and (3) they increase the respiratory movements and promote oxidation processes of metabolism. He has used the combined treatment in a variety of pathological conditions, including gout, arthritis, rheumatism (both articular and muscular), diabetes, anæmia, neurasthenia, defective circulation, asthma, dyspepsia, constipation, and neuralgia.

CHRISTMAS BOOKS FOR CHILDREN.

WE have unfortunately already so many inducements to take our pleasures sadly at this festive season that it seems rather a thankless task to point out an additional, if perhaps somewhat exaggerated, danger which may lurk in well-intentioned attempts to minister to the entertainment of the younger members of the community. At this time children's books hold a prominent position on the booksellers' shelves and paterfamilias collects a bundle of them for the little folk at home without any misgiving as to the innocence of the proceeding. Certain of our German friends have, however, suggested that the intellectual pabulum furnished by even the most respected writers of fable may have a pernicious influence upon the youthful mind. In his "Grundriss der Heilpadagogik," a recent work treating of feeble-minded children, Dr. Theodor Heller gravely discusses the potentialities for evil of the familiar Struwelpeter, more particularly of the story of the naughty Frederick. "The barbarity of Frederick, who in certain respects embodies the type of moral insanity, is not," he says, "calculated to inspire in numerous weak-minded children feelings of abhorrence, but is likely rather to give rise to that perverted frame of mind which causes morally deficient persons to enjoy written descriptions or pictorial representations of crimes and evil doings." Dr. Heller regards it as hardly doubtful that the recital of Frederick's adventures may arouse in the minds of juvenile auditors sentiments inimical to the public well-being and he lays special stress on the fact that the retribution which eventually overtook Frederick was a long time in catching him. That cruel boy, it will be

remembered, behaved in the following scandalous fashion. To quote the English version:

> "He caught the flies, poor little things,
> And then tore off their tiny wings.
> He killed the birds and broke the chairs,
> And threw the kitten down the stairs."

and it was not until he injudiciously interfered with the "faithful Tray" that disaster befell him. Even then it does not appear that any permanent improvement in his behaviour resulted. On the whole, the moral of this story is not good, though this does not seem to have occurred to its author, Dr. Heinrich Hoffmann, himself a worker among the mentally deficient. Dr. Heller's contention is nothing new, for in the early years of the last century George Cruickshank was acutely pained by the immoral tendency of some folk tales. "Puss in Boots" he considered as an example of the benefits to be obtained from lying. In "Hop o' my Thumb" the conduct of the parents who "lost" their children, to say nothing of that of the ogre who was lured into cutting the throats of his little daughters, filled him with horror, while he felt compelled to re-write "Cinderella" and "Jack and the Beanstalk" as temperance tracts. "Puss in Boots" certainly did lie, or rather told his master to do so, but we do not think that any child was ever led from the straight path by knowing the story. Criticism of this sort may perhaps seem to savour of breaking a butterfly upon the wheel but there is probably a sound basis for Dr. Heller's contention that the books supplied to children help largely in the formation of their characters and that the selection of such books should therefore be effected with due discretion.

ANGIO-NEUROTIC ŒDEMA: ŒDEMA OF THE MUCOUS MEMBRANE OF THE STOMACH.

IN 1882 Quincke described a peculiar condition characterised by transient swellings in various parts of the body which he termed "circumscribed œdema." Subsequently Strübing proposed the name of "angio-neurotic œdema" as expressing the etiology. The disease is generally regarded as a variety of urticaria. In some cases not only is the skin but the mucous membranes are affected. In the *American Journal of the Medical Sciences* for November Dr. R. S. Morris has recorded a case which is of great importance as it appears to be the only one in which a piece of the mucous membrane of the stomach was examined. The patient was a man, aged 21 years, who went to hospital on Oct. 23rd, 1903, complaining of swelling of the hands, legs, and larynx, and of gastric trouble. His mother suffered from similar swelling of the hands and had gastric symptoms. The patient first noticed swelling of the hands at the age of 12 years. Sometimes it came on after exertion. It usually disappeared within 48 hours. Subsequently swellings appeared in the feet and then in the elbows and knees. The symptoms gradually increased in severity. At times the throat was affected and the voice became husky. Four years before he came under observation he had "œdema of the glottis" and tracheotomy was performed. In April, 1903, he had another attack of œdema of the glottis which came on in the morning. At noon he could not eat his dinner and at 6 P.M. he was unconscious and tracheotomy was again performed. On July 13th he noticed a swelling under the shoulder blade on rising. This gradually extended up his back and his throat was affected at 4 P.M. At midnight an attempt was made to perform intubation, which was unsuccessful, and a trocar was thrust into the trachea. In August he again had laryngeal obstruction which subsided under steaming of the throat. Coincident with the swelling of the skin there were sometimes nausea, vomiting, and sharp epigastric pain, which lasted one or two days. On admission there were puffiness all over the right hand and foot and red, slightly elevated patches on the thorax and the abdomen. On the following day laryngoscopy showed that the mucous membrane of the larynx was red and slightly swollen. On the 25th there was only slight swelling of the dorsum of the left hand and of the sole of the left foot. On the 28th the stomach was washed out. The fluid which returned contained blood and a large piece of tissue which was placed in absolute alcohol. Microscopical examination showed that it was a piece of gastric mucous membrane. There was great œdema of the interstitial tissue; the lymph spaces and vessels were enormously dilated, the cells of the stroma were separated by wide spaces or vacuoles, and the fibres in many cases were separated into their ultimate fibrillæ. On the 29th the patient felt sick and refused his breakfast. He vomited a light-greenish fluid several times and complained of pain in the stomach. This case therefore confirms the view that the gastric symptoms frequently present in angio-neurotic œdema are due to œdema of the mucous membrane of the stomach. Possibly the periodic vomiting described by von Leyden is due to the same cause.

MR. GEORGE JACKSON AND THE GENERAL MEDICAL COUNCIL.

Mr. George Jackson, one of the Direct Representatives of the profession on the General Medical Council, wishing to bring under the notice of the constituency the subjects which have been discussed in the Council, has addressed to us a lengthy communication the publication of which is rendered unnecessary by the fact that our reports of the last two sessions of the Council contain full accounts of the matters to which he refers. Mr. Jackson regrets that the English Colleges still recognise as places of study institutions which are not suitable in the opinion of the Council and regrets also the *volte-face* of his colleagues in the matter of the registration of medical and dental students. He considers, "with reference to the desirability of reviving in some form and to some extent the old system of pupilage ..... that the student should be taught the art of treating the patient as well as the disease and that he would be more likely to learn that from an experienced medical practitioner than in the wards or out-patient departments of hospitals." The question of pupilage has rather dropped out from the debates of the Council, but in the November session it was revived upon the motion of Mr. George Brown whose action was justified by the belief of many practitioners that in pupilage lies the correction of the unpractical nature of the modern student's medical curriculum. Educational authorities, however, very generally agree that pupilage is now impracticable.

THE medical officer of health of the Cape Colony states that for the week ending Nov. 26th the conditions as regards plague in the colony were as follows. No case of plague in human beings occurred during the week throughout the colony but plague-infected rodents were found at Port Elizabeth and East London. In the Cape Town district, including the shipping and the harbour, 1019 rodents were examined but no plague infection was found. In the other districts no plague infection in man or animal was discovered. As regards the Mauritius a telegram from the Governor, received at the Colonial Office on Dec. 15th, states that for the week ending Dec. 15th there were 11 cases of plague and nine deaths from the disease.

A BLUE-BOOK has now been issued (Messrs. Eyre and Spottiswoode, East Harding-street, London, E.C. price 8*d.*) containing the terms of the International Sanitary Convention of Paris, 1903, translated by Dr. Theodore Thomson one of the medical inspectors of the Local Government

Board and one of the British delegates at the international conference at which the convention was drawn up

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WE much regret to announce the death at the early age of 49 years of Mr A Quarry Silcock surgeon to St Mary's Hospital Mr Silcock's death followed upon an operation for acute appendicitis and has come as a great shock to his many friends

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Lord Strathcona and Mount Royal has consented to preside at a festival dinner to be held at the Whitehall Rooms Hôtel Métropole, London, S W, in aid of the National Hospital for the Paralysed and Epileptic, on April 13th next

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KING EDWARD'S HOSPITAL FUND FOR LONDON

MEETING OF GENERAL COUNCIL

A MEETING of the general council of this Fund was held on Dec 19th at Marlborough House H R H the PRINCE OF WALES being in the chair

Lord ROTHSCHILD, the honorary treasurer, stated that the funds received for general purposes up to Dec 12th after paying expenses were £67 999 18s 11d and that the League of Mercy would provide £14 000 He regretted that there was very little difference in the regular contributions to the Fund this year, but the League of Mercy had been very active and had been able to contribute a larger sum to the Fund than it did last year

Sir HENRY BURDETT said it would be remembered that His Majesty the King had expressed a wish that the income of the Fund should in part be made up of annual subscriptions of small sums The League of Mercy endeavoured to carry out this object and received 1s subscriptions in contributions of 1d a month As one example it might be mentioned that 32,000 pence were collected in one tenement occupied by artisans in sums of under 1s and collected by 1d subscriptions The total result of the collections for this year was £16 000 and it had been decided that the League should hand to the treasurer £14 000 The League of Mercy, which extended to the home counties, had very usefully and helpfully given grants to those hospitals outside the area of the County of London to which the King's Fund did not contribute

Mr H C SMITH presented the report of the executive committee, which recommended the distribution of £79 000 to the London hospitals making with the £1000 intrusted to the Fund by the London Parochial Charities for the convalescent homes, a total distribution of £80 000 He regretted that the committee had been [illegible] least £300,000) which w[illegible] Royal Highness to take ad[illegible] anonymous donor The reference in the anonymous donor's letter to the possible diversion of funds subscribed for the relief of the sick poor to purposes of medical education had not been lost sight of and a committee had been appointed to inquire into the subject Its report might be expected to be published before the end of the year

In presenting the report of the hospitals distribution committee Sir WILLIAM CHURCH said that the executive committee had placed in its hands the sum of £79 000 for distribution among the London hospitals In connexion with the grants which the committee was able to recommend for the year 1904 it might be well to mention that the amount available for distribution in 1903 was £20 000 more than that which was now at disposal—viz, £99 000, of which a sum of £18,751 9s was transferred from the general funds He [illegible] pital to [illegible] by the [illegible] hospitals [illegible] and remarked that but for the fact that the annual grant of £250 made to the City Orthopædic Hospital was for the maintenance of beds reopened by the Fund they would have seriously considered the question of making any grant They had, however, [illegible] withdrawing the annual grant [illegible] and must reserve their entire [illegible] in considering the claims of t[illegible] on the Fund Several of the subjects which, being preliminary to modern medical education were taught at the various medical schools occasioned a demand on the accommodation of the hospitals and a drain on the resources of the schools, which would be avoided were instruction on these subjects provided elsewhere The question was one which deserved the attention of all who were concerned with the increasing requirements of hospitals The number of beds reopened as free beds by the Fund since its inauguration was 443

HIS ROYAL HIGHNESS, in moving the adoption of the report, said I note with pleasure that as we are receiving a larger sum from the League of Mercy than we anticipated it is not now necessary to draw on our reserve as we at first feared in order to distribute £80 000, and, in fact, I am glad to say we have a small surplus which will be used towards replacing, though only to a slight extent the £18 000 odd taken from the reserve last year In reviewing the results of this year's work I must refer to what was said last year when we distributed £100 000 by drawing on our available balance for that purpose to the extent of £18 751 9s I then pointed out that we drew that large sum from our reserves for one year only and I expressed a hope that we might receive increased contributions to enable us to distribute an equal sum this year without any encroachment on our reserves These hopes were subsequently further raised by the munificent offer of an anonymous donor who promised us a gift which would increase our permanent income by £4668 a year provided twice this amount was raised before the end of this year That condition, unfortunately, has not been fulfilled As I anticipated last year the public are now confronted with appeals for over £1 000 000 in connexion with hospitals in London There is of course, a limit to what the charitable public can do and we have had to cut our coat according to our cloth We are only able this year to distribute £80 000, including the £1000 which the London Parochial Charities generously continue to intrust to us for allotment to convalescent homes This sum is, I am only too well aware, insufficient to enable us to fulfil our original object We could easily distribute £150 000 a year to hospitals which require the money and would put it to good use In the meantime I venture to think that means may be found of increasing the amount at the disposal of the hospitals for carrying on their ever growing work It must be remembered that if the expenditure of the hospitals can be decreased without impairing the extent or efficiency of the work they do the result would be even more satisfactory than an increase in the money subscribed to support the hospitals Waste of all kinds is a bad thing and as I have before pointed out, some of the hospitals certainly fail in the point of economy This is a matter of the utmost importance and one with which this Fund most properly concerns itself Our object, however, is to help not to hinder, to encourage, not to chill, the work of charity, and to do this by offering friendly assistance to those hospitals which as we think might save money by a few slight alterations in their arrangements I feel sure that those who are generously giving their time to the administrative work of our hospitals would accept the advice we offer in the spirit in which it is meant even though on examination it might not be found to apply to their particular case This year a beginning has been made in the direction I have indicated A statistical report has been prepared on the expenditure of the 16 largest general hospitals which alone received more than half our grants last year And in doing so we have supplied ourselves with information which no one hospital could be expected to provide on its own [illegible] some remarkable results [illegible] of these 16 hospitals on the [illegible] er which control exists And the aggregate value of the sums paid in excess of these averages works out to no less than £39 400 for the year 1903 We do not say that that sum can all be saved at once But no doubt every hospital will realise that a large saving could be effected by making sure that no other institution in similar circumstances doing the same work as its own equally well and at a lower cost We have done all in our power to provide t[illegible] comparative prices [illegible] hospitals Some o[illegible] serious consideration By way of example I would mention that there is a difference of no less than 3½d per pound

between the highest and lowest prices paid for the same description of beef, of 3½*d.* per pound for legs of mutton, of 1*s.* 1*d.* in the price of fowls, of 2½*d.* per gallon in the price of milk, and of 7*d.* per pound in the price of tea. In drugs and household articles there are similar discrepancies. There may be reasons to account for some of these differences and all we ask for is careful inquiry on the part of each hospital. I am glad to hear that in the case of one of the largest and best-managed hospitals our efforts have been gratefully acknowledged and that as a result of the comparisons we have provided various economies have been effected which have resulted in a considerable saving. There is another matter to which I must briefly allude. The anonymous donor in his letter to me referred to the question of money subscribed to the relief of the sick poor being used for the purposes of medical education and he expressed a hope that as President I would endeavour to prevent any of the Fund being thus diverted. The doubts which evidently exist in the mind of the anonymous donor were also shared by some other members of the Fund. The question is one which cannot be settled offhand, for there are proper considerations which may be urged both for and against a contribution from the general funds of a hospital to the funds of its medical school. We have therefore thought it best to appoint a committee, consisting of Lord Welby, Sir Edward Fry, and the Bishop of Stepney. I am glad to say that that committee has commenced its labours, that it is receiving every assistance from those who are able to set all sides of the question before it, and I feel confident that a report by three such eminent men will be of the greatest value in assisting us to come to a right conclusion. We have, therefore, shown our subscribers that we are endeavouring as far as possible to assist the hospitals to lay out our grants economically and to husband their resources; that we are willing to help them, if they so desire, to settle any vexed question that may arise with regard to difficulties of administration, whether internal or external, or on matters concerning reconstruction, removal, or amalgamation. The question remains, Can we increase our income and therefore their income? I must own myself greatly disappointed at the results of our appeal for the sum necessary to enable us to accept the generous offer of my anonymous friend. Whether he may be willing to extend beyond the end of this year the period in which we may collect for this object I cannot say. I trust he may do so, for I confess that there is to my mind no better form of charity and I would, while we are still in 1904, appeal once more to those who desire to see their gifts economically and wisely distributed to help us to accept the offer. In these times of depression in trade there are, I know well, great difficulties. But I am convinced that sooner or later the working of this Fund will be appreciated at the proper value. I trust sooner.

HIS ROYAL HIGHNESS then thanked all those who had so ungrudgingly given their time and abilities on behalf of the Fund and moved the adoption of the report.

The LORD MAYOR of LONDON (Mr. JOHN POUND) seconded, and Mr. EDGAR SPEYER supported, the adoption of the report.

Sir JOSEPH DIMSDALE said he understood that it did not come within the province of the Fund to give to any hospital which was substantially endowed. On that ground St. Bartholomew's Hospital was entirely eliminated but he found that many hospitals with endowments were assisted.

Mr. H. C. SMITH, as chairman of the executive committee, said that in answer to Sir Joseph Dimsdale he would like to say that the matter was referred by the distribution committee to the executive committee and they gave patient consideration to it. They thought that a hospital possessed of such very large property as St. Bartholomew's was not one coming within the scope of the Fund. Supposing that a substantial grant were made at the present time it would not carry with it the right of future inspection and recommendation—the indispensable condition upon which the funds were distributed.

The motion was then put and carried unanimously.

On the motion of the Bishop of ROCHESTER, seconded by Lord IVEAGH, a vote of thanks was proposed to His Royal Highness.

To this HIS ROYAL HIGHNESS briefly replied and the proceedings then terminated.

LIST OF GRANTS AND DONATIONS.

The following is a list of the grants and donations, with the comments of the distribution committee. The absence of a grant does not necessarily imply dissatisfaction.

Alexandra Hospital for Children, £500—£350 for balcony; Belgrave Hospital, £500; Blackheath and Charlton Cottage Hospital, £25; Bolingbroke Hospital, £2000 to new building fund; British Lying-in Hospital, £100; Cancer Hospital (an excellent institution); Central London Ophthalmic Hospital, £150; Central London Throat and Ear Hospital, £300 (the committee would view with satisfaction an amalgamation of the Throat and Ear Hospitals); Charing Cross Hospital, £2500—£1000 to building; Chelsea Hospital for Women, £350; Cheyne Hospital, £100 in consideration of the fact that curable cases are admitted; *City of London Hospital for Diseases of the Chest*, £750 and £1500 annual to support beds reopened by the Fund; City of London Lying-in Hospital (an institution doing excellent work); City Orthopædic Hospital, £250 (the committee feels bound to make this donation in order to provide for the cost of beds opened by this Fund up to Dec. 31st; in view of the hospital's refusal to join in the amalgamation of the orthopædic hospitals the committee reserves entire freedom of action in respect of next year's awards); Clapham Maternity Hospital, £100; "Dreadnought" Hospital, £500 annual, £1000; East End Mothers' Home, £200; East London Hospital for Children, £1000; Eltham and Mottingham Cottage Hospital, £25 (an institutio[illegible]; Evelina Hospital, £100; Free Home for the [illegible] pleased to see that this useful institution is [illegible]h Hospital, £100; Friedenheim Hospital, £25; General Lying-in Hospital, Lambeth, £200; German Hospital, £150 towards new mortuary and post-mortem room; Gordon Fistula Hospital, £50; *Great Northern Central Hospital*, £1000—£750 annual to maintain beds reopened by this Fund and £250 for improvements now in hand; Grosvenor Hospital for Women and Children, £100; Guy's Hospital, £5000 annual, £1000; Hampstead General Hospital, £500 to building fund; Home and Infirmary for Sick Children, £25 towards cost of balcony; Hospital for Consumption, £350 towards ward furniture; Hospital for Diseases of the Throat, £100 (the committee would view with satisfaction an amalgamation of the throat and ear hospitals); Hospital for Epilepsy and Paralysis, £400; Hospital for Invalid [illegible] Sick Children, Great Ormond-street, [illegible] Hospital f[illegible] this Fund [illegible]g this hospital to another site); Hospital of St. John and St. Elizabeth, St. John's Wood, £500 annual to maintain beds reopened by this Fund; Italian Hospital, £500 annual to maintain beds reopened by this Fund; Kensington Dispensary and Children's Hospital, £25; *King's College Hospital*, £1000 annual, £1000 *donation*, and £2500 to the fund for the removal of the hospital to South London, which the committee views with great satisfaction; London Fever Hospital, £200; London Homœopathic Hospital, £200; *London Hospital*, £2000 (£5000 annual to meet expenditure out of capital made necessary by improvements in the wards); London Lock Hospital, £600; London Temperance Hospital, £400; London Throat Hospital, £50 (the committee [illegible] an amalgamation of the throat and ea[illegible] Hospital (formerly entered as Cottage Ho[illegible] Memorial *Cottage Hospital*, Mildmay-par[illegible] Nose, and Throat Hospital (the committee is unable to make a grant to this institution as a hospital but would be prepared to consider a grant in the event of amalgamation with the other throat and ear hospitals); Metropolitan Hospital, £1500 (£500 annual to maintain beds reopened by this Fund); Middlesex Hospital, £1250 (£1000 annual to meet deficiency); Mildmay Mission Hospital, £200; Miller Hospital, Greenwich, £750; Mount Vernon Hospital *for Consumption* (formerly entered as North London Hospital for Consumption), Mount Vernon, Hampstead, £500 (£1000 annual to support beds reopened by this Fund); National Dental Hospital, £25 (to debt); National Hospital for Diseases of the Heart, £15 (to complete cost of x-ray apparatus); National Hospital for the Paralysed and Epileptic, £1000 (£750 annual to meet deficiency); National Orthopædic Hospital, £400 (this grant is given pending the amalgamation with the Royal Orthopædic Hospital which the committee views with great satisfaction and for which a special sum is set aside); New Hospital for Women, £250; North-Eastern Hospital for Children, £500 annual, £1000; North-West London Hospital, £500 (the committee again urges that immediate steps be taken to provide funds not only to maintain but to rebuild this hospital); Norwood Cottage Hospital, £25; Paddington-green Children's Hospital, £400; *Passmore* Edwards' Acton Cottage Hospital (the committee is glad to say that it does not require help from the Fund this year); Passmore Edwards' Hospital, East Ham, £100 (£50 to out-patient department [illegible] Edwards' Hospital for Willesden, £5[illegible] Hospital, Wood Green, £25; Poplar [illegible] Charlotte's Lying-in Hospital, £50[illegible] (to building *fund*); [illegible] rly entered as Dental [illegible] educe debt; Royal Ear [illegible] would view with satis[illegible] *d ear hospitals*); Royal [illegible] £750 annual to meet [illegible] the committee is glad [illegible] have been carried *out*); [illegible] £400; Royal London [illegible] [illegible] special sum is set aside); *Royal* [illegible] Women, £750 for building; Royal [illegible] £300 to debt; St. Barnabas [illegible] institution does not appear to [illegible] g's Fund, not being managed [illegible] St. George's Hospital, £1000; St. John's Hospital [illegible] e Skin, £25 to Shepherd's Bush branch; St. John's Hospital, Lewisham, £75 towards renovating nurses' quarters; St. Mark's Hospital, £75; St. Mary's Children's Hospital, £600; St. Mary's Hospital, £2000—£1000 annual to meet deficiency and £1000 to be applied towards completion of buildings; St. Monica's Hospital, Brondesbury-park, £60;

St. Peters Hospital for Stone £10 St Saviours Hospital, Regent Park, N W, £100, St Thomas's Hospital (the committee is glad to see that there is a substantial surplus this year), Royal Army Maternity Hospital Hackney (the committee cannot continue to support this institution in its present condition) Samaritan Free Hospital

The awards recommended for convalescent homes are as follows —

METROPOLITAN HOSPITAL SUNDAY FUND.

ANNUAL GENERAL MEETING

THE annual general meeting of the constituents of this Fund was held in the salon of the London Mansion House on Dec 16th under the presidency of the LORD MAYOR Among those present were the Archdeacon of London, Prebendary Rudgeway, Sir William Broadbent, Sir Alfred Fripp, Sir Joseph Dimsdale, M P, Sir Savile Crossley, Sir John Bell, Sir Henry Burdett, the Hon Sydney Holland, the Chief Rabbi, Mr. Thomas Wakley, Dr. J G Glover, Mr R B Martin, M.P, Mr. R Grey, and the Hon Stephen Coleridge

The report of the council stated that the result of the year's collection was £63,054 The collections in the various places of worship amounted to £47,911, of which St Paul's Cathedral headed the list with £5492. Mr. George Herring had again supplemented the amount collected in various places of worship to the extent of a quarter of the total amount obtained His gift this year had been £11 926

This report was adopted on the motion of Mr ROBERT GREY, seconded by Sir WILLIAM BROADBENT, after considerable discussion, in the course of which Sir JOHN BELL drew attention to the refusal of an award to the City Orthopædic Hospital this year, and Mr. COLERIDGE proposed an amendment having reference to the alleged appropriation by medical schools of funds granted for other purposes In seconding this amendment the Rev L S LEWIS complained that the London Hospital had spent £7000 on a sports ground.

The Hon SYDNEY HOLLAND, chairman of the London Hospital, pointed out that the money was used for the purpose referred to because it was a good investment The ground could be sold at any time for £10,000 and it was bringing in 4 per cent. interest He was of opinion that the sick poor were most efficiently helped by medical schools attached to hospitals.

Dr. GLOVER and Sir HENRY BURDETT took part in the discussion, the former dwelling upon the incalculable benefit which medical research had conferred upon humanity and the latter suggesting that a special fund should be created to support medical schools if such support was found necessary As the committee of King Edward's Hospital Fund dealing was now sitting he hoped that matter would be withheld until [illegible] presented its report

To this suggestion Mr COLERIDGE assented

On the motion of Prebendary REYNOLDS, seconded by Mr D. POWER, the council for the year 1904 was re elected for the year 1905, with the addition of the Right Rev. Bishop Amigo (of Southwark), the Rev. C. J. Proctor (vicar of Islington), Sir J. Thomson Ritchie, Bart, and Mr. Deputy Wallace, to fill vacancies Motions were also adopted thanking Mr. George Herring for his generosity which had assisted the Fund by the large amount of £11,926, and also fixing Hospital Sunday, 1905, for June 25th

The proceedings, which at one time threatened to be of a stormy character, concluded peacefully with a vote of thanks to the Lord Mayor, proposed by Mr WAKLEY who referred in eulogistic terms to the admirable way in which the meeting had been conducted This motion was duly seconded and carried with acclamation

MEETING OF LONDON COMMERCIAL TRAVELLERS

[illegible] 17th, the Lord Mayor invited [illegible] London to a conference at the [illegible] the best means of increasing the collections on Hospital Sunday to £100,000 There was a large attendance

The LORD MAYOR, in opening the proceedings, said that commercial travellers had great opportunities of introducing the work of the Hospital Sunday Fund to the notice of the [illegible] with whom they came in contact without injuring their own charities which they supported so well.

Sir JOSEPH DIMSDALE proposed the following motion —

That the hospitals of London are deserving of support and especially at the present time

He said, referring to the last words of the motion, that the hospitals at all times deserved the greatest support Some people did not realise the gigantic work which the hospitals were doing year by year In 12 months no fewer than 108 687 in patients and 1,771,199 out patients were treated This immense work necessitated an outlay of no less than £1 239,988, towards which there was only a reliable income of £920,113, leaving a deficit to be made up by voluntary contributions of £319,875 But during the past year 211 hospitals, institutions, and dispensaries had received substantial assistance from the Hospital Sunday Fund The committee was also authorised to spend 5 per cent of the amount collected in surgical appliances This year 6158 appliances had been granted The total receipts had risen from £27,700 in 1873, when the Fund was inaugurated, to £63,054 this year, and the congregations contributing to the Fund from 1072 to 2004 He mentioned the munificent yearly donations given by Mr. George Herring, whose last contribution amounted to £11,926 He thought his hearers would agree that the expenses incurred by the work of the Fund were very moderate when he told them that it was done upon an outlay of less than 5 per cent If only 2,000,000 individuals of the population would give 1s each the amount asked for would be obtained The object of the meeting was to ask the assistance of those present in bringing the Fund to the notice of the toilers, so many of whom must be in symp[illegible] pitals. The hospitals of [illegible] institutions, and he asked [illegible] pols to ask the e whom they met to support them as charities which, regardless of creed or nationality, gave comfort and support to the sick and alleviated suffering Some 25 per cent of the occupants of beds in the London Hospital came from country districts and these districts should therefore render their assistance to the Fund There was no greater act of charity that his hearers could possibly do than by helping to assist the hospitals and he thanked God that our institutions of healing were still kept up by voluntary contributions.

Sir FREDERICK TREVES seconded the motion and said that the basis of appeal for hospital funds had entirely changed since the time when the Hospital Sunday Fund was founded owing to the advance of medicine and surgery and the innumerable methods of treatment requiring special appliances and antiseptic conditions which were hardly attainable in private houses The work of the hospitals therefore played a more important part than formerly and was directly beneficial to all classes of the population The London hospitals were metropolitan only in their locality. Patients were to be found in every London hospital from every part of the country and from practically every colony under the British flag If any of them heard of a friend being injured in the country almost the first remark made was "Well, I do hope he has fallen into the hands of a competent surgeon." Nobody ever stopped to think where such surgeons obtained their education It was a remarkable fact that the medical education of this country depended entirely on the voluntary hospitals, and to an overwhelming extent on the voluntary hospitals in London. If they inquired what the

subscribers to hospitals got for their money he would, taking but one instance, ask what they thought was the commercial value to the world of antiseptic surgery as introduced by Lord Lister? This boon without price was a free gift to the world, after no State grant, no huge sum subscribed to carry on an inquiry, from a solitary man working in a hospital supported by voluntary contributions. In the London Hospital alone there were treated 183,000 new out-patients in one year, more than the whole population of Brighton. Filing past the table at which he was standing at the rate of four a minute, night and day, the patients would take a month to go by. Sir Frederick Treves then gave some remarkable statistics showing the amount of drugs and surgical material used in the London Hospital in one year in order to put before the mind of his audience some idea of the almost unimaginable benefit conferred upon humanity by the work done by our magnificent charities for the sick.

Archdeacon SINCLAIR, in supporting the motion, said that there were 2000 beds unoccupied in the London hospitals for want of money. He would not like to see the hospitals go upon the rates and the commercial travellers of London, who themselves had done so much in helping the helpless, had numerous opportunities of enlisting more general support for the Fund.

Mr. J. E. ALGER, on behalf of the meeting, thanked the Lord Mayor for inviting the commercial travellers and assured him of their desire that the movement should have a practical result.

The motion was adopted unanimously.

Mr. CHARLES A. BODY proposed, and Mr. J. EATON seconded, the following motion:—

That this meeting of London commercial travellers, being desirous of assisting the hospitals of London, pledge themselves to do their utmost to raise a fund to be added to the collection at St. Paul's Cathedral on Hospital Sunday, June 25th, 1905.

It was explained that the object of adding the money to the St. Paul's collection was to gain the grant which Mr. Herring was good enough to give.

The motion was unanimously adopted and on the proposal of Mr. H. S. WINDSOR and Mr. A. J. BRETT a vote of thanks was accorded to the LORD MAYOR who said that special collecting cards would be sent to all who had been invited to the meeting.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8438 births and 5631 deaths were registered during the week ending Dec. 17th. The annual rate of mortality in these towns, which had been 17·3, 21·6, and 18·5 per 1000 in the three preceding weeks, rose again to 19·2 per 1000 last week. In London the death-rate was 19·0 per 1000, while it averaged 19·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 7·7 in Hornsey, 8·7 in Barrow-in-Furness, 10·2 in Southampton, 12·2 in Leyton, in Walthamstow, and in Handsworth (Staffs.), 12·9 in Bournemouth, and 13·0 in Wallasey; the highest rates were 24·7 in Stockton on-Tees, 25·5 in Bristol, 25·7 in Wigan, 26·1 in Burton on-Trent, 26·2 in South Shields, 26·4 in West Bromwich, 27·4 in Plymouth, and 30·2 in Hanley. The 5631 deaths in these towns last week included 421 which were referred to the principal infectious diseases, against 400, 482, and 438 in the three preceding weeks; of these 421 deaths, 146 resulted from measles, 69 from whooping-cough, 66 from diphtheria, 49 from diarrhœa, 43 from scarlet fever, 42 from "fever" (principally enteric), and six from small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Bournemouth, Southampton, Burton-on-Trent, King's Norton, Smethwick, Aston Manor, Warrington, Huddersfield, Rotherham, or Newport (Mon.); while they caused the highest death-rates in Plymouth, Grimsby, Wigan, Middlesbrough, Stockton-on-Tees, South Shields, Tynemouth, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Plymouth, Devonport, Bristol, Grimsby, Liverpool, Wigan, Middlesbrough, and Tynemouth; from scarlet fever in West Bromwich; from diphtheria in Handsworth (Staff Tees, and West Hartlepool; from Helens, Barrow-in-Furness, Hull, South Shields, and Merthyr Tydfil; from "fever" in Burnley and York; and from diarrhœa in Hanley. Of the six fatal cases of small-pox registered in the 76 large towns last week, two belonged to Preston, two to South Shields, one in Oldham, and one in Halifax. The number of small-pox patients in the Metropolitan Asylum hospitals, which had been one, three, and four at the end of the three preceding weeks, had further risen to six at the end of last week; two new cases were admitted during the week, against two, two, and one in the three preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital on Saturday, Dec. 17th, was 2403, against 2741, 2625, and 2490 on the three preceding Saturdays; 242 new cases were admitted during the week, against 262, 247, and 263, in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 385, 565, and 448 in the three preceding weeks, rose again last week to 487, and were 142 above the number in the corresponding period of last year. Influenza was certified as the primary cause of 45 deaths in London last week, against 30, 26, and 30 in the three preceding weeks. The causes of 65, or 1·2 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Leicester, Bradford, Leeds, Newcastle upon-Tyne, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Burton on-Trent, Birmingham, Coventry, Liverpool, St. Helens, Warrington, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·0, 21·2, and 19·7 per 1000 in the three preceding weeks, further rose to 22·6 per 1000 during the week ending Dec. 17th, and was 3·4 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 16·9 in Perth and 17·1 in Edinburgh to 24·8 in Paisley and 26·6 in Glasgow. The 747 deaths in these towns last week included 32 which were referred to whooping-cough, 17 to measles, 16 to diarrhœa, seven to diphtheria, six to "fever," and two to scarlet fever. In all, 80 deaths resulted from these principal infectious diseases last week, against 60, 71, and 68 in the three preceding weeks. These 80 deaths were equal to an annual rate of 2·4 per 1000, which was 1·0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 21, 34, and 38 in the three preceding weeks, declined again last week to 32, of which 26 occurred in Glasgow and three in Edinburgh. The deaths from measles, which had been 16 and ten in the two preceding weeks, rose again to 17 last week and included ten in Aberdeen, three in Glasgow, and three in Leith. The fatal cases of diarrhœa, which had been 18, ten, and 15 in the three preceding weeks, increased last week to 16, of which six were registered in Glasgow, four in Dundee, two in Edinburgh, and two in Aberdeen. The deaths from diphtheria, which had been nine, six, and three in the three preceding weeks, rose again to seven last week and included five in Glasgow. The fatal cases of "fever," which had been three, four, and one in the three preceding weeks, increased last week to six, of which four occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 174, 190, and 204 in the three preceding weeks, further rose last week to 206 and were 22 in excess of the number in the corresponding period of last year. The causes of 13, or nearly 2 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·6, 27·0, and 25·2 per 1000 in the three preceding weeks, was 25·3 per 1000 during the week ending Dec. 17th. During the past four weeks the death-rate has averaged 25·0 per 1000, the rates during the same period being 18·9 in London and 16·1 in Edinburgh. The 184 deaths of persons belonging to Dublin registered during the week under notice included 10 which were referred to the principal infectious diseases, against 21, 20, and 14 in the three preceding weeks; not any of these deaths resulted from

small-pox, scarlet fever, diphtheria, or whooping-cough. These 10 deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the principal infectious diseases being 1·0 in London and 0·9 in Edinburgh. The fatal cases of measles, which had been 12, 12, and ten in the three preceding weeks, further declined last week to six. The deaths from diarrhœa, which had been four, three, and one in the three preceding weeks, rose again to three last week. The 184 deaths in [illegible] under one year [illegible] upwards; the [illegible] the number in [illegible] elderly persons showed a small decrease. Six inquest cases and five deaths from violence were registered; and 51, or nearly a third, of the deaths occurred in public institutions. The causes of ten, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. Crowley to the *Bulwark* on recommissioning, H. F. Thewicz to the *President* additional and lent to Deptford Yard. Staff Surgeon W. Jackson to the *Spartan*. Surgeons: B. Pick to the *Illustrious*; J. H. McDowall to the *Good Hope*; and H. G. T. Major and G. L. Buckeridge to the *Bulwark* on recommissioning.

ARMY MEDICAL STAFF.

Surgeon-General Sir W. Taylor, K.C.B., K.H.P., is placed on retired pay (dated Dec. 2nd, 1904).

ROYAL ARMY MEDICAL CORPS.

The retirement of Major A. E. C. Spence is to take effect from Nov. 21st, 1904, and not as stated in the *London Gazette* of Nov. 15th, 1904.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cheshire Surgeon Captain R. B. Wright resigns his commission (dated Dec. 17th, 1904). 2nd Hampshire: Surgeon-Lieutenant J. H. F. Way resigns his commission (dated Dec 17th, 1904) 2nd Middlesex: Andrew Elliot to be Surgeon-Lieutenant (dated Dec. 17th, 1904). 1st Orkney: Alfred Lees Low to be Surgeon-Lieutenant (dated Dec. 17th, 1904). 2nd Sussex: Surgeon-Lieutenant H. E. Hewitt resigns his commission (dated Dec. 17th, 1904).

THE TIBET MISSION

The King has been graciously pleased to make the following appointment to the Most Honourable Order of the Bath in recognition of the services of the undermentioned in connexion with the Tibet Mission.—To be Ordinary Member of the Military Division of the Third Class, or Companion of the Order, Lieutenant-Colonel Laurence Augustine Waddell, C.I.E., I.M.S.

BALSAM OF PERU AS A FIRST DRESSING IN WARFARE.

In the *Centralblatt fur Chirurgie*, No. 26, 1904, Dr. W. J. van Stockum advocates the employment of balsam of Peru as a first dressing for wounds on the field of battle, his recommendation being founded on a series of experiments extending over a number of years. Facility of application and good results are the advantages claimed. Neither disinfection nor sterilisation is, as a rule, necessary and the dressing can be left 20 days or longer without renewal. The balsam is both compressive and absorbent and in wounds of the surface anyone can apply it; but in the case of penetrating wounds of narrow dimensions the aid of a surgeon is desirable, and if he should make use of a syringe to reach the inner parts it ought to be sterilised. The statistics quoted by Dr. van Stockum are entirely in favour of his contention. He finds that only 4·5 per cent. of the cases of compound fracture in which balsam of Peru was employed as a first dressing were attended by suppuration, whereas in cases that were treated according to the antiseptic system the percentage was 17.

THE OFFICE OF DIRECTOR-GENERAL, A.M.S.

"A disturbing rumour is current," says the *Army and Navy Gazette*, "that the appointment of Director-General Army Medical Service is to be abolished and an officer of junior rank to a Surgeon-General appointed as expert adviser for the Army Medical Service under the Adjutant-General. If such a course should be adopted we take it that the Advisory Board would be a party to it. We can only say that the abolition of the Director-Generalship would be attended by deplorable consequences. No successor to Sir William Taylor has yet been appointed, though several highly distinguished officers are available, and it is possible that the Army Council and the Advisory Board may each have nominated different persons, in which case the Secretary of State should most certainly select the officer desired by the former. The delay is a scandal. We can hardly credit the statement."

THE CONSTRUCTION OF ARMY BARRACKS AND HOSPITALS.

From what we can learn an important change is to be made in regard to the building of new barracks and hospitals for the army. In the past it has always fallen to the special charge and responsibility of the Royal Engineers to design and to carry out all the work connected with the construction and repair of these buildings, whereas the officers of this corps are, so far as the planning and construction of new buildings are concerned, to be relieved of this work, which is in future to be transferred to, and placed under, a civilian head. The recently erected barrack buildings at Colchester and Mill Hill, to the latter of which we have already called attention, may be taken as being the latest constructed on Royal Engineer plans.

COOL DRINKING WATER FOR SAILORS IN WARM CLIMATES.

In the second part of an article in the *Archives de Médecine Navale*, to which we referred last week in this column, Dr. Le Méhauté briefly alludes to a measure recently adopted by the French naval authorities which is calculated to give great satisfaction to the persons principally concerned. In all French men-of-war stationed in latitudes where the climate is conventionally called warm the artificial cooling of the drinking water is in future to be obligatory. To this [illegible] tepid water.

DEATHS IN THE SERVICES.

Deputy Inspector-General of Hospitals and Fleets George Andrew Campbell, R.N. (retired), on Dec. 19th, aged 68 years. He entered the Navy in 1860, became staff surgeon in 1872, fleet surgeon in 1883, and retired in 1891 with the rank of deputy inspector general. He served in the *Heela* at the bombardment of Alexandria on July 11th, 1882, during the Egyptian campaign (Egyptian medal, Alexandria clasp, and Khedive's bronze star) and throughout the naval and military operations, near Suakim, in the Eastern Sudan, in 1884 (Suakim clasp).

HOSPITAL SHIPS IN WAR.

A *Times* telegram, dated Brussels, Dec. 18th, states that the International Congress on Hospital Ships in time of War, now sitting at The Hague, has adopted without modification the draft convention drawn up by the committee.

THE WAR IN THE FAR EAST.

Further and more detailed accounts of the 12 days' conflicts at Port Arthur in connexion with the capture of 203 Metre Hill only serve to bring out in a more realistic way the fierce nature of the fighting, the valour displayed, and the losses sustained on both sides. The Japanese have subsequently succeeded in adding to their captures but the besieged fortress still holds out. Some correspondence of a courteous and chivalrous nature has taken place between General Stossel and General Nogi relative to the danger incurred by the sick and wounded undergoing treatment in hospital from the Japanese artillery fire. The position on the Shaho appears to be unchanged and it is probably unique in the history of war that two enormous armies should remain inactive in such close touch with one another. We hear little or nothing from Government sources of the working of the Russian hospital and transport arrangements at the seat of war and this is only natural in the circumstances. If any reliance can be placed, however, upon the descriptions that have been received and occasionally published from correspondents in Manchuria the situation at Mukden and the railway transport difficulties which the wounded had to encounter after the late series of battles have been very deplorable and trying to all concerned. The fact is that the number of medical officers and the means available for the relief and treatment of the wounded and sick so suddenly

thrown upon the hospital commissariat and sick transport departments proved inadequate to cope with the situation.

The Russian Red Cross Society has received advice that in Port Arthur there are two Red Cross hospitals with 300 beds, besides the *Mongolia* hospital ship, and a special note is made of the fact that when Spiridinoff took the ammunition train into the town just as the communications were about to be cut by the Japanese he took in large supplies of medicines, bandaging material, and surgical instruments. 200 extra beds were provided for so that "the Red Cross Society of Port Arthur disposes of 800 beds, 130,000 roubles in cash, and unlimited credit."

The *Pharmatzevtitcheski Viestnik* says that a telegram appears in the Moscow papers from P. I. Postnikoff, chief medical officer of the Dvoryansk detachment, in which he, *inter alia*, says that the surgical instruments obtained from a well-known firm proved to be "beneath criticism," showing, he adds, that "one must not rely even on firms of a well-established reputation."

Correspondence.

"Audi alteram partem."

LEPROSY IN CHINA.

To the Editors of THE LANCET.

SIRS,—Will you allow me to ask for information from the numerous readers of THE LANCET who are personally acquainted with China and the Chinese? What I particularly want to know is whether there are any differences in the conditions of life in North and South China which may be supposed to explain the prevalence through untold generations of a contagious disease in the one whilst it is entirely absent in the other. As all know, Peking is in the extreme north of China proper and Canton in the extreme south. Between them lies an immense inland district bordered by a sea coast of many hundred miles. Now, in the whole Canton district leprosy is very abundant whilst in the Peking district (inclusive of Teintsin, the Liverpool of North China) it is reputed to be absent. It may be that further investigation will prove that the absence is not so absolute as some have assumed, but at any rate the evidence has been sufficient to convince so good an authority as Mr. James Cantlie who in his prize essay on the subject strongly asserts it. In the district which intervenes the disease gradually diminishes as you go north. There is, of course, the freest possible intercourse between the two districts and although the Chinese at home are not much given to wandering, opportunities for contagion must be of constant recurrence. In passing, it may be remarked that Mr. Cantlie credits the Chinese of the southern provinces with having introduced leprosy into almost all the islands of the southern hemisphere into which they have immigrated. They have, however, never been able to introduce, or at any rate to perpetuate, it in the northern half of their own kingdom.

Can any plausible explanation of this extraordinary fact be offered? That the prevalence of leprosy is not influenced by climate, latitude, geological formation, or race is now acknowledged by all, and the facts quoted would appear to be in direct opposition to any suggestion of contagion. If the Chinese have been able by personal infection to spread the disease in the Sandwich Islands and other places, why should they not with vastly increased opportunities extended over many ages have succeeded in infecting men of their own race near at home. My own explanation of the facts is ready and definite. North China is a dry, sandy district abounding in salt and producing little or no fish. South China has abundant fish and its salt is imported and taxed. The Chinaman can introduce leprosy wherever he goes if only he finds there plenty of fish. His success becomes assured if only there be a deficiency of salt. The agent by which he works is the fish which he cures so badly. Such is my creed, and I shall feel exceedingly indebted to any of your readers who can offer any other or produce any facts which may qualify it.

I am, Sirs, yours faithfully,

Dec. 20th, 1904. JONATHAN HUTCHINSON.

THE RECENT DISCUSSION ON CHLOROFORM ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—May I be permitted to supplement your reporter's account of the remarks I made when bringing to a close the discussion on chloroform anæsthesia at the Royal Medical and Chirurgical Society last week? My reason for asking this favour is that, as the account now stands, I appear to have had little or nothing to say in reply to Sir Victor Horsley's criticisms of those principles in chloroform administration upon which I laid such stress when opening the discussion. The fact is that Sir Victor Horsley's assertion that certain clinical phenomena do not occur led me to express the opinion that he could not have closely observed his cases. I do not see, indeed, how it is possible for anyone who is not frequently engaged in the actual administration of anæsthetics to human subjects to become acquainted with the phenomena which precede, attend, and follow a state of danger during anæsthesia. With due respect to the physiologist, I am convinced he has yet to appreciate the fact that in patients under anæsthetics phenomena may arise which are not to be seen in the physiological laboratory. With due respect to the operating surgeon I venture to say that he, too, has little or no opportunity of studying the inception of threatening conditions during anæsthesia.

I do not propose to add anything to what I have already said concerning the question which was more immediately before the meeting—the advisability of employing a regulating inhaler for chloroform. Nor do I propose to refer again in general terms to what I considered to be the first principle upon which chloroform should be given.[1] I intend merely to deal with two passages in Sir Victor Horsley's remarks. He has challenged views which I formed many years ago,[2] which I have imparted to a large number of students, and which I still hold. With the object of deciding whether Sir Victor Horsley's observations or my own are correct I should like to invite the criticism of all careful clinical observers on the points in question and to ask you, Sirs, to be kind enough to receive and to publish these criticisms.

Sir Victor Horsley denies (1) that different patients require widely different quantities of chloroform in order to produce similar effects; and (2) that tongue retraction and laryngeal spasm may occur as the immediate reflex results of surgical stimuli.

1. I have notes of many cases in which remarkably small quantities of chloroform have been sufficient to abolish the usual reflexes and to bring about the usual phenomena of chloroform anæsthesia. Anæmic, non-excitable women, of the chronic invalid type, who have never tasted alcohol, often display this susceptibility. Plethoric, muscular men, who have led outdoor lives and have smoked and drunk to excess may display such insusceptibility to chloroform that it is difficult, even when the Skinner's mask is dripping with this anæsthetic, to secure the proper degree of anæsthesia. The body weight is a comparatively unimportant matter. Children, for example, often require comparatively large doses of ether or chloroform before surgical anæsthesia becomes established. The susceptibility of the nervous system and the degree of muscular development appear to be the chief factors in determining the requisite dose. Were we to proceed upon the lines advocated by Sir Victor Horsley we should poison our susceptible and produce intoxication rather than anæsthesia in our insusceptible patients.

2. My statement is that in certain of the cases in which threatening symptoms appear under chloroform such symptoms may be primarily dependent upon spasmodic states of the upper air passages produced by surgical stimuli. I am not contending that these spasmodic phenomena only originate in this way. As I have pointed out, they may arise before the operation commences—i.e., when other muscles are being thrown into a state of spasm during the excitement stage. I admit, moreover, that they may in some cases result from the direct effects of the anæsthetic vapour. But this is not the present point. The patients most liable to reflex (operative) tongue retraction are the muscular,

[1] THE LANCET, Nov. 26th, 1904, p. 1497.

[2] See *Transactions of the Royal Medical and Chirurgical Society*, vol. lxxiv., "Clinical Observations upon Respiration during Anæsthesia, with Special Reference to the Causes of Embarrassed and Obstructed Breathing."

bloated, alcoholic, and flabby men, of thick build, with an already somewhat restricted throat capacity. Certain of the patients in whom I have witnessed the phenomenon have been great smokers and have had "irritable throats" and some degree of nasal obstruction. The procedure most likely to induce tongue retraction is either dilatation of the sphincter ani or some rectal manipulation or operation. I have, however, known it occur as the immediate result of a simple cutaneous incision. I have met with it under ether and under chloroform. It is certainly more common *before* the cornea has become insensitive than after, although owing to the lateness of the rectal reflexes to disappear it may take place even when full anæsthesia has been produced. That tongue retraction actually occurs may be proved by observing the organ to be drawn back and thus to arrest breathing at the moment the particular stimulus is applied. The patients most liable to the intense form of laryngeal spasm which culminates in complete arrest of breathing are healthy, florid, young women. The operations most likely to induce this spasm are abdominal operations in general and especially those in which the peritoneum is dragged upon. Thus, it is common in oöphorectomy, abdominal hysterectomy, &c. It is, curiously enough, far more common under chloroform than under ether and is liable to arise during moderate anæsthesia when the cornea is just sensitive to touch. Rectal operations will also induce laryngeal spasm but the "crowing" is of a different pitch from that produced by peritoneal traction. In moderately intense spasm—i.e., when some air still passes through the larynx—the patient's colour may be but slightly altered, but in the most intense forms with high-pitched stridor the organ may completely close and the only remedy short of laryngotomy is the forcible tongue traction described by Lord Lister which, as he very properly insists, operates reflexly in relaxing the spasm.

I have not entered into the above details with the object of insisting upon the frequency of reflex tongue retraction and reflex laryngeal spasm as factors in chloroform accidents. As a matter of fact, each of these two conditions is often present in a minor degree during surgical operations, the former giving evidence of its presence by stertor, the latter by stridor. It is only when partial or complete occlusion of the air tract has taken place that the symptoms become urgent; and unless the administrator has been watching the case carefully he may readily attribute the symptoms to an overdose of chloroform, or, worse than this, he may overlook the asphyxial factor, and, putting his finger upon an indifferent pulse, he may quote the case as one of "cardiac syncope" or "chloroform collapse."

I am, Sirs, yours faithfully,

FREDERIC W. HEWITT.

Queen Anne-street, W., Dec. 20th, 1904.

To the Editors of THE LANCET.

SIRS,—At a recent meeting of the Royal Medical and Chirurgical Society I expressed my belief that the "importance of administering known proportions of chloroform was over-estimated," but as the exigencies of time did not allow of my giving my reasons for coming to this conclusion and as some very emphatic opinions in favour of "dosage" were expressed, I should like to be permitted to say a few more words upon the subject. In its ordinary medical sense the term "dose" is used to indicate the quantity of a drug which the patient actually gets, but this does not seem to be the way in which the term is understood by all the advocates of the new inhalers. For [illegible] not to use a percentage-[illegible] upon a misconception [illegible] These instruments, in [illegible] as far as I understand them, do more than attempt to standardise and to regulate the strength of the vapour which it is possible to supply; the exact volume of this standardised vapour—i.e., the dose—which the patient actually gets must surely depend upon his lung capacity, vigour of respiration, and other variable factors.

I am under the impression that the advocates of the exhaust or vacuum form of apparatus (Vernon Harcourt and Levy) maintain that by making the vigour of the respirations a controlling element in the working of their machines they have come within measurable distance of being able to regulate these variable factors, but this view seems to be repudiated by those who are in favour of the plenum or propulsion system (Dubois, Waller, and others). Assuming, however, that one or other, or both, of these methods give correct results, it appears to me that if the knowledge of the percentage strength of the vapour inhaled is to be of any real practical value we must also assume that the effect of the drug is in all people in exact proportion to the strength presented for inhalation, that there is no such thing as personal idiosyncrasy, and that there are no extraneous influences which can modify this simple reaction. The arguments brought forward in favour of these assumptions seem to me to be inadequate. They are for the most part based upon laboratory experience under conditions which do not tally with the peculiar clinical conditions which the anæsthetist is called upon to face. I do not think that the available clinical evidence with the new instruments touches the question of "dosage"; the results obtained would have been equally good if the experienced men by whom the machines have hitherto been used had merely used them as regulating inhalers, and had been quite ignorant of the exact strength of the vapour which the movements of the index represented. Whether we should use an elaborate machine merely to regulate the strength of the vapour, or whether it may not be better, as I believe, to rely upon the skill and care of the administrator are, however, points quite apart from the question of "dosage."—I am, Sirs, yours faithfully,

Dec. 19th, 1904. J. FREDK. W. SILK.

THE MEDICINE OF ASSAM.

To the Editors of THE LANCET.

SIRS,—The medical men in this district have recently been asked to record on forms provided by the Government authorities any cases of cancer that may come under notice. This has reminded me that during an experience of several years in Assam I have never once diagnosed a case of cancer of any description, neither have I ever heard of such a case. My practice has comprised the supervision of the health of many thousands of coolies from different parts of India and natives of Assam and adjoining countries. This complete absence of a disease so common in other parts of the world I think is worthy of note, though, of course, this fact must be well known to any medical man who has practised in Assam.

Another affection which I think one would certainly expect to be common in a tropical country is also extremely rare in Assam. I allude to hepatic abscess. The absence of this is the more curious since a very large percentage of the sickness and deaths occurring in the coolie population is the result of dysentery. This disease out here does certainly not run such a definite course as happens in other countries, neither is the temperature typical, but the stools are quite characteristic and have all the appearance of those of true dysentery. A medical man who has practised in Assam for 30 thirty years told me that he has seen only four or five cases of hepatic abscess. Enteric fever, too, is no doubt extremely rare. Apart from the absence or rarity of the diseases I have briefly mentioned we are afflicted with all the usual complaints of other countries with the addition of a few special diseases peculiar to this part of the world. Among them I may mention "sore-foot" and kala-azar. Malaria and ankylostomiasis are the two main causes of sickness.

I am, Sirs, yours fathfully,

D. J. DRAKE, M.R.C.S. Eng., &c.,
Medical Officer, Teypur Medical Association.

Thakurbarrie P.O., Assam, Nov. 19th, 1904.

"FUNCTIONAL" DISEASES AND THE PATHOLOGY OF CHOREA.

To the Editors of THE LANCET.

[illegible] in that it compels us to take stock of [illegible] physiological knowledge in regard to those diseases with which it is mainly concerned. Besides this, if it is not an impertinence to say so, it is a communication marked by a certain charm of style which is not always to be found in scientific literature.

If I may be allowed to offer a few comments on the paper

I should like to say something about the use of the word "functional," as to the propriety of which Dr. Dickinson leaves us in some doubt. He admits that "it has its uses" and would apply it "provisionally to disorders of a temporary sort which have not yet displayed their morbid anatomy," but considers it "most obviously out of place when attached to such as persist unto death and produce it" (p. 1630). A little later he appears to sanction the definition of a functional disease as one "without a pathology, disturbance of action unattended with change of structure." Now, in all deference I wish to submit that this use of the word is too exclusively that of the morbid anatomist. That change of function implies a physical change of some sort is an axiom to which no exceptions should be allowed. But there are physical changes which cannot be appreciated by morbid anatomy alone, which is concerned only with such changes as can be demonstrated to the eye by some process of "cutting up" dead and diseased organs. A "functional" disease to the morbid anatomist is a purely negative conception. Pathology, however, is a kingdom of many provinces, among which morbid anatomy is but one, and though a large and important area is hardly at present so large or so important as that of pathological chemistry. From the point of view of the chemical changes which take place in the cells of the body during disease the term "functional" has a very positive meaning and I venture to think that this meaning—namely, a change in chemical action or structure—is the one which should occur to the mind whenever the term is employed. Far from impeding the advance of knowledge such a use of the word enables the mind to carry on its inquiries at the point where morbid anatomy leaves off and suggests investigations on new lines and by other methods.

Chorea offers, to my mind, an excellent example of functional disease, but *not* of a disease without a pathology. The morbid anatomy does not tell us much, as the lesions described may well be secondary or symptomatic and not causative in character. Even allowing that all cases of chorea are not due to the same cause, it seems most probable that many, if not most of them, are like tetanus due to a [illegible], the micrococcus rheu- [illegible] Poynton. Like tetanus it is a disease characterised by muscular contractions, and though these contractions do not appear in so definite an order or in such regular degrees of intensity, yet the occurrence of hemichorea and chorea limited to certain groups of muscles indicates the definite involvement of certain cells in the motor tract. Now in tetanus it is known that the toxin has a special affinity for certain motor cells and enters into so firm a combination with them that in some cases no recovery is possible. In rabies, too, the very elusive poison can be neutralised by an emulsion of brain cells and thus rendered harmless to susceptible animals. May it not be that in chorea certain motor nerve cells are similarly poisoned but that the chemical change is of a less stable character, so that dissociation and recovery are generally possible?

This is a view which has for some time been present in my mind and doubtless in the minds of many who have considered the question. It serves, I think, to illustrate the sense in which the term "functional" should be used in pathology, not as a pure negation but as expressing the positive idea of changes which are none the less physical in that they cannot be demonstrated by the ordinary methods of the dead-house or even by the more refined "cutting up" which is necessary for microscopical examination.

I am, Sirs, yours faithfully,

J. M. FORTESCUE-BRICKDALE, M.A., M.D. Oxon.

Clifton, Dec. 12th, 1904.

THE EVOLUTION OF MAN'S DIET.

To the Editors of THE LANCET.

SIRS,—In his kind reference to my papers on the Evolution of Man's Diet, recently published in THE LANCET, Dr. J. Sim Wallace (in THE LANCET of Dec. 17th, p. 1751) throws doubt on my contention that man "has lost the power of digesting in the unprepared state all but the very choicest varieties of wild vegetable food." He believes, on the contrary, "that man has it in his power to become able to digest or to cope with cellulose to all intents and purposes as efficiently as the anthropoid apes," and even hints that man and the apes differ but little in respect of digestive capacity. Without following Dr. Wallace in the *a priori* arguments he advances in favour of this view, I will content myself with referring to the great biological fact that every species tends to alter in correspondence with alterations in its environment. Now, the diet of man and his homo simian ancestors has been undergoing a steady change since anthropoid times—i.e., for many thousands of generations, and we may therefore safely conclude that the digestive capacities of man differ very decidedly from those of his anthropoid ancestors. Observation confirms this deduction. It would be quite impossible for man to subsist on the natural diet of any of the existing anthropoids. Much of the vegetable food which these latter consume is by reason of its natural density, to say nothing of its bitter and acrid taste, quite unfit for human consumption. This density is, of course, due to the presence of an abundance of tough cellulose, a fact which renders it highly probable that the anthropoid can cope with cellulose more efficiently than can man. Dr. Wallace appears to assume that the rôle of cellulose in the alimentary tract is a purely mechanical one, for he says, "if we consider the simple fact that cellulose is not digested chemically in either man or anthropoids practically all we have to consider is the ability to masticate food and to transmit it. Thus, all that is required is a more muscular intestine and especially a more efficient masticatory apparatus." I cannot, however, admit the proposition that "cellulose is not digested chemically in either man or anthropoids." It is true there is no evidence of the secretion either in man or the anthropoid, or indeed even in the herbivora, of a cellulose-dissolving ferment. There is, however, evidence that in all of them cellulose in its less dense forms is dissolved by bacterial agency, and it has been shown in the case of the herbivora that the solution is largely effected by means of a vegetable ferment developed from the vegetable food itself—a ferment identical with that which the living plant employs when a solution of cellulose is demanded—e.g., during the ripening of a fruit.

But while I am unable to accept all Dr. Wallace's deductions I am heartily with him in his main contention that man is capable of coping with much coarser vegetable foods than the pernicious paps and messes with which the stomach of the young human is nowadays so wantonly deluged. It is, as Dr. Stuart Tidey truly remarks,[1] largely in consequence of this system of dietary that the digestive tract of us moderns is so often "a pathological specimen from end to end," that "the buccal cavity exhibits a picture of ruin and decay ..... the anal orifice is girt about with a ring of piles, while the intervening portion with its accessory organs affords a kaleidoscopic picture of pathological changes." If physicians could be got to realise the importance of providing the jaws, teeth, and the muscular coats of the digestive tract with adequate work an untold amount of disease and suffering would be averted.

I am, Sirs, yours faithfully,

Wimpole street, W., Dec. 18th, 1904. HARRY CAMPBELL.

[1] THE LANCET, Dec. 17th, p. 1749.

TREATMENT OF ACUTE PNEUMONIA BY CONTINUOUS COUNTER-IRRITATION WITHOUT VESICATION.

To the Editors of THE LANCET.

SIRS,—The treatment of pneumonia by various forms of counter-irritation is of very old standing. Linseed-meal poultices with and without mustard, blistering fluid, iodine liniment, and similar preparations have been applied to the chest with success but with the great disadvantages of more or less severe vesication or some other drawback. The following simple method of applying counter-irritation without vesication has in my hands proved itself to be an excellent system of treatment. After making a thorough examination of the chest I sponge the affected side over with warm water, adding some alcohol (either rectified spirit of wine or whisky) which I always do to increase the irritation unless the skin be very tender or sensitive. Then I quickly apply thermogen or a capsicum pad which are much more easily applied and so do not exhaust the patient. The effect is to produce a dry glowing warmth and pain is relieved almost immediately. The application is never sticky or cold, it can easily be destroyed when required, and is perfectly cleanly. It is necessary only to replace it once or twice in the 24 hours, the medical attendant knowing that the patient's

strength is not being unnecessarily lowered by continuous applications every few hours and that there is no danger of exposure to sudden change of temperature or draughts. From a patient's point of view, which is really of most importance, it is very comfortable, as it is neither weighty, wet, nor sodden, but is dry and gives a glowing warmth that relieves pain. The patient is also saved the fatigue incidental to an application that requires renewal every few hours.

I am, Sirs, yours faithfully,
ARNOLD M. ST. JOHN WRIGHT, L.S.A.

Chester, Dec. 18th, 1903.

THE "POLICE CALL."

To the Editors of THE LANCET.

SIRS,—Having read the article in THE LANCET of Dec. 17th, p. 1742, regarding the responsibility of the police for payment of services rendered at their request in cases of street accidents, &c., I may be allowed to recall a recent experience of my own.

A policeman called and informed me that a man had been knocked down by a tram-car and requested me to accompany him to the scene of the accident. Having received his assurance that a certificate would be sent to me in due course and having noted the constable's number for future reference I went and did what was necessary for the patient. Next day the policeman called again but instead of giving me the promised certificate he informed me that a friend of the injured man, whose name and address he gave me, had undertaken to pay my fee and that therefore no certificate would be sent to me from the police station. I questioned the right of the police authorities to refer me for payment to a man who was quite unknown to me but expressed my willingness to wait a few days before making formal application for my certificate. I reminded the policeman of his promise when he summoned me to the accident; also of the fact that I had his number recorded in my note-book.

A week passed and, needless to say, the obliging friend made no sign. I therefore sent a strongly worded letter [illegible] y informing him of all the circum- [illegible] the policeman's right to shift his [illegible] her shoulders. My certificate for [illegible] police fund was sent immediately with a note apologising for the delay. Since then I have in all cases obeyed the summons of a policeman only on the distinct understanding that I should receive my certificate from the authorities and have invariably received it.

I am, Sirs, yours faithfully,
T. R. HENDERSON, M.B. Edin.

Balham, S.W., Dec. 18th, 1903.

THE PRE-CANCEROUS STAGE OF CANCER.

To the Editors of THE LANCET.

SIRS,—I think we are entitled to ask for some further information on this subject, for it seems to convey nothing unless it means that every growth must be removed as soon as found in case it may become malignant and that every tear of the uterine cervix is to be sewn up. It is at least reasonable to suppose that a prolonged irritation of a part, due to the presence of a tumour or otherwise, may lessen its vitality and in this way be apparently the exciting cause of malignant disease in a suitable subject, but cancer of the penis may come to the circumcised and the uncircumcised and epithelioma of the lip is not unknown in those who do not smoke.

It is another matter when we come to the instruction of the laity in the early signs of cancer. Here we deal with no hypothetical pre-cancerous stage, but with the definite disease. Mr. C. Hamilton Whiteford advises that the public should be educated in the early signs. Surely this is going a great deal too far, for what would be the result—a graduate in first aid would consider that if he were able to say that a growth was a cancer, he could say equally well what were not cancerous, and in most cases it would be as safe to toss up a coin. What the public require to be taught is to seek advice early and not to think that they know when to ask competent advice and when not. We require to begin, however, with many medical men, who do not investigate when a simple diagnosis seems to be a likely one and who, when a patient says "I have got bleeding piles, doctor," give an ointment without troubling to see if there is anything else. I allow that the patients frequently do not see the necessity of an examination. Mr. Whiteford also says that the laity must be educated in the prevention and cure of cancer. We get enough of the cure in the daily papers, but I would like to hear of some really practical method of prevention.

I am, Sirs, yours faithfully,
SKENE KEITH.

Dec. 19th, 1903.

MOSQUITOES ON BOARD SHIP.

To the Editors of THE LANCET.

SIRS,—In his able categorical reply to the criticisms of Professor Baccelli, whose disparagement of the work of the modern investigators of tropical diseases is amazing, Dr. C. Christy regards the presence of malaria on vessels as due to its transmission by passengers off river steamers. He also, it is true, refers to the presence of both *culex* and *anopheles* on steamers between Karachi and Trieste. While diffident of making the suggestion to a medical man so closely associated with work in malarial countries I am tempted to ask whether Dr. Christy has not overlooked, at any rate in his letter, a very important breeding ground of these gnats on board ship—namely, in the residue of rain water in the ship's buckets, in fresh-water tanks, boats, or other receptacles insufficiently scrutinised on the official rounds of inspection. I have travelled on a steamer from estuaries in tropical Queensland to Plymouth Sound with mosquitoes active in the saloon the whole time on a voyage that lasted nearly 80 days, and as Major R. Ross states that the larval stage may last only a week in a hot climate it is probable that some of these insects completed their metamorphoses on the voyage. A more efficient scouring of all likely receptacles of fresh water would preclude such unrecorded births at sea.

I am, Sirs, yours faithfully,
F. G. AFLALO.

Bournemouth, Dec. 17th, 1903.

REX *v.* JOHN DALE TUCKER: THE POWERS OF THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—This man, an unqualified practitioner, was tried at the recent Liverpool assizes on a charge of attempting to obtain money by false pretences and being found guilty was sentenced by Mr. Justice Phillimore to four months' imprisonment. The circumstances of the case are so far out of the ordinary that on behalf of the prosecutor, Dr. David Lauder Lindsay of this city, we write to place them before you, believing that they will be of some interest to the medical profession. Briefly the facts are as follows.

In April of this year Tucker came to Liverpool and in the name of Dr. Henry Gould, a duly qualified man, bought a practice from Dr. Wright of this city, for which he gave £350. He carried it on until the month of August when he entered into negotiations, still in the name of Dr. Henry Gould, with our client, for the sale of the practice to him. He informed Dr. Lindsay that he, Tucker, was Dr. Henry Gould, a duly qualified man, and had given £650 for the practice and had been in it for 12 months. An agreement was accordingly drawn up but fortunately just before the same was signed, owing to information which came into the possession of the vaccination officer of the district in which Tucker practised, he was brought up at the police-court and charged with forging two death certificates in the name of Dr. Henry Gould, when he pleaded guilty and was fined. Dr. Lindsay of course repudiated all negotiations and laid an information against Tucker, upon which he was arrested and in due course committed for trial and convicted.

Having regard to all the facts at our disposal we considered the case one which should be laid before the General Council of Medical Education and Registration, as we did not think it right that a [illegible] put to the great expense of pro[illegible] with the object of punishing a man whose [illegible] in posing as a duly qualified man. We therefore saw the Registrar of the Council and put the whole facts before him, when he seemed by no means inclined to give any assistance. He intimated, however, that if we were to lodge the facts with a written statement he would lay them before the Council. This we accordingly did, sending him a copy of the depositions and also all the facts at our disposal. In due course we received a letter from the Registrar that

the Penal Cases Committee had consulted the Council's legal advisers with a result that they were unable to assist Dr. Lindsay in the matter. Fortunately for Dr. Lindsay, we then approached the director of public prosecutions who recognised that the case was one of importance both to the medical profession and also to the public at large and at once undertook the conduct of the prosecution.

The above being the facts, we think it desirable that the medical profession should know where they stand with regard to such cases. It appears to us to be an anomaly that where you have a case where an unqualified man has been posing in the name of a qualified practitioner, signing agreements in that name, and entering into obligations more or less onerous, no help should come to the injured medical man from the central body but that he should be left to conduct any prosecution personally, whilst from the public point of view the anomaly is still greater. In the present case an unqualified man carries on a practice in Liverpool from April last right up to the trial (Tucker being on bail), while patients in a thickly populated district were going daily to consult him under the impression that he was a regular practitioner. When all these facts are ascertained and fairly placed before the Medical Council they are obliged under the direction of their legal advisers to decline to take any steps in the matter. We cannot help thinking in the interests of the profession and of the public at large it is high time that power should be given to them to enable them to take action in such a case as this.

We are, Sirs, yours faithfully,

Liverpool, Dec. 20th, 1904. SAMPSON AND CO.

CHOLERA AND PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

THERE has been a considerable recrudescence of cholera in Asiatic Turkey and the neighbouring regions since the date of my last letter which appeared in THE LANCET of Nov. 26th. At Bagdad no cases of the disease were observed between Oct. 29th and Nov. 20th. On the latter date a single fatal case occurred and between the 20th and the 30th there were five cases and as many deaths. Basra, which is believed to have been free from cholera since August 19th last, has again become infected. Two cases and one death occurred there on Nov. 26th and four more cases with one death in the next two days. At Bedra and Zorbatia, mentioned in my last letter, the epidemic seems to have come to an end. But it has reappeared at Amara where (or in the neighbourhood of which) it has caused 26 fatal cases among nomad tribes; at Hay, where ten fatal cases were recorded between Nov. 7th and 10th; and at other places. In the vilayet of Mossul cholera has been particularly active. At Mamouret-el-Hamidie 29 cases and 24 deaths were observed between Nov. 8th and 23rd; at Rania (or Ranieh) there were 28 cases and 12 deaths between Nov. 9th and 13th and 82 cases with 69 deaths between the 13th and the 28th. At Guré, near Rania, 13 cases and three deaths occurred in the week ending the 28th. The disease has also been reported, but without details, from Gulamber and it is said to be causing some ten or 12 deaths daily among the Zenkibir tribe near Salahieh, in the *caza* of Mossul. At Deir-Zor, an important centre of traffic on the Euphrates, 13 cases with nine deaths occurred between Nov. 16th and 23rd. Thence it has spread to Rif and Memtah, two villages on the Aleppo road, eight hours distance from Deir-Zor. The disease here is spoken of as "suspected cholera" and no figures have been furnished. It has also spread to Cheh (? Sheikh), described as a village 30 hours distance from Deir-Zor, on the banks of the Euphrates and close to Aleppo. There can be no question that Aleppo, which has apparently been free from cholera for nearly a year, is again threatened by a reappearance of the disease. In the important towns of Penjvin, Suleimanieh, and Revendouz, all near the Persian frontier, cholera has again become seriously epidemic. At Penjvin, 80 cases with 60 deaths occurred between (?) Oct. 4th and 8th. News is lacking as to the subsequent behaviour of the disease here, save that two fatal cases occurred on Nov. 3rd. At Suleimanieh four cases with three deaths were reported c Nov. 3rd and 4th, 16 cases with eight deaths between tl 5th and the 18th, and as many as 70 cases with 36 deat between the 18th and the 28th. Finally, at Revendouz cases with 36 deaths occurred between Nov. 22nd and 28th.

There is still difficulty in obtaining accurate inform tion of the epidemic on the Persi side such news as is obtainable not of very recent date. Writing on Oct. 18th the Ottom sanitary delegate on the Tehran Board of Health stat that over 400 deaths were then daily occurring at Tabri where the weather was unusually hot and a sou wind was prevailing. The disease had spread to mar villages in the neighbourhood and the governor and mar of the inhabitants had fled. From recent Russian sourc it appears that cholera has since almost disappeared fro Tabriz. At Mohamerah, on the Shatt-el-Arab, the disea was said to have reappeared but this has not been co firmed. At Meragha many deaths were occurring dail At Resht and Ghilan an improvement was recorded, on sporadic cases being observed. At Meshed 15 deaths we occurring daily. This was spoken of as "an enormous numb for so small a place," but though Meshed may be a sma town in itself it should be remembered that it is a gre centre for Shiah pilgrims who go in very large numbe to worship at the shrine of the Imam Riza. From Meshe cholera was reported to have spread northwards to Dereghe where it was said to be raging. Sporadic cases wer occurring at Ispahan and at Nain and Meshal. The disea was still present in Yezd but the numbers were unknow It was reported to have disappeared from Kermanshah b was still prevalent on the roads between Hamadan, Save and Sultanabad, where it was causing a high mortality. had reappeared at Shuster and broken out at Mashur. Kazvin and Astrabad sporadic cases with low mortality we occurring. At Kashan the disease has reappeared. improvement was reported from the regions near the Persi Gulf shores but the report adds that in the Doshest (? Dushtistan) region and the valley of Rou-Hillai about 60 deaths from cholera had been officially recorded; while the town of Shiraz the mortality was put down at as ma as 13,000. It is further added that at the end of Septemb cholera was raging in the following places:—Tanguista Kovisé, Ahéans, Beloughé, and Tchahpir. (I quote the names as they appear in the report in question which written in French; I have been unable to identify the plac on the maps at my disposal.)

On Russian territory the following has been the rece course of the epidemic. In Transcaspia the disease has be present only in the military station of Serakhs, where t cases and eight deaths occurred in the week ending Oct. 31 (New Style); four cases in that ending Nov. 7th; and thr cases between the last date and Nov. 16th. At Baku cases and seven deaths were recorded in the week endi Nov. 1st; six cases and two deaths in that ending the 8th and seven cases in the week ending the 16th. Cases cholera have also occurred in the naphtha works Balakhani, near Baku, and in the village of Yurdjivan, the Shemakha district. In three villages in the Djeva district of the Baku government 20 deaths from choler have taken place, and ten cases are reported from two noma villages near the Russo-Persian frontier. At Tiflis five cas occurred between Nov. 23rd and 27th and five more cas on the 29th. In the Erivan government there has been very serious extension of the epidemic, particularly in t districts of Nahitchevan and Sharuro Daralaguez. T following figures have been reported for this governmen in telegrams received from the Ottoman Consul-General Tiflis:—

From Nov. 4th to Nov. 7th...	132 cases	.....	80 death		
,, ,, 8th ,, ,, 14th...	133 ,,	.....	53 ,,		
,, ,, 15th ,, ,, 21st...	? ,,	.....	? ,,		
,, ,, 21st ,, ,, 28th...	915 ,,	.....	733 ,,		

In Astrakhan and its neighbourhood five cases with tw deaths occurred between Oct. 26th and 31st, thr cases between Nov. 1st and 3rd, and none since. Tchagan, in the Astrakhan district, seven cases with fo deaths were reported between Oct. 26th and 31st; ar between Nov. 8th and 16th there were 16 cases in the villa of Teliatchi, on the shores of the Caspian, and one case the Cossack station of Ataman. A few cases have al occurred at Saratof, at Tsaritsyn, at Khvalinsk, at Uvek, ar other places in the Saratof government. Finally, in t

government of Samara there were 75 cases with 63 deaths between Oct 24th and 28th, 26 cases in the week ending Nov 8th and 64 cases between that date and the 16th Most of these cases occurred in the district of Nikolaiefsk but there were also cases in the districts of Novo Uzensk and Samara A single fatal case has been reported from Ufa in a group of prisoners arriving from Samara

No further cases of plague are reported from Smyrna but a single imported case recently occurred on an Austrian steamer which arrived at Beirut from Alexandria The diagnosis was confirmed bacteriologically and the patient is now convalescent

Constantinople Dec 7th

SANITARY LEGISLATION IN THE UNITED STATES

(FROM OUR SPECIAL SANITARY COMMISSIONER)

THE great trouble in America is the want of centralisation and uniformity The advantages of local autonomy are many and manifest No one doubts that the sturdy burghers of the Middle Ages in obtaining charters liberties and franchises for their cities rendered great service to the cause of progress There were, however no railways in those days Travelling was dangerous and but few ventured on long journeys Not only each nation but each district was self sustaining Exports and imports were restricted in the main to articles of luxury To day we need especially in matters relating to public health international laws But in United States do not yet seem tion of the necessity of national laws At Washington I experienced a curious sense of solitude, of isolation and felt as if lost in space Other large towns and centres had at least a life of their own Washington and the small District of Columbia, as already explained possess no elected municipality or State legislature[1] This fact might easily be forgotten just as the Municipal Council of Paris or the County Council of London may be forgotten by those who visit these capitals so as to come in touch with the national life of France or of Great Britain In London or Paris it has always seemed as if it was possible to place a finger on the pulse of the nation For sanitary legislation for information in regard to what is occurring in any part of the country with respect to an epidemic or any other important sanitary matter, there are the special departments at the Ministry of the Interior in the Rue Cambacérès or at the Local Government Board in Whitehall At Washington whatever approach to a national public health administration office or bureau there may be hides itself under the ridiculous title of Marine Hospital This forcibly recalls the blue bottle fly so named because it is not blue and because it is not a bottle Washington is not a seaport town there is no marine at Washington and at the building in question there is not the smallest trace [illegible] Marine Hospit [illegible] health questio[illegible] The spread of [illegible] of Louisiana [illegible] an educational purpose in showing the necessity of some central and national control over local legislatures A Bill was then passed by the Congress of the United States establishing a national board of health Evidently, however, this was only what may be described as panic legislation, for the law was very soon abrogated and it was thought sufficient to establish a national public health bureau in connexion with the Marine Hospital Service

Perhaps if the word quarantine had been used instead of the word hospital it would better explain the situation It seems as if the Government of the United States did not dare to appear in any way desirous of interfering with the sanitary legislation of these various States The Government of the United States apparently shrinks from dealing with its own citizens On the other hand it has no hesitation in legislating with regard to all other States and nations so long as they are not comprised within the Union which it is its business to govern Consequently, while repudiating all intention of interfering with the State legislatures the central or Federal Government has sent its officers and soldiers to the different seaport towns These functionaries proceed to these places lay hands upon foreigners who arrive and impose upon them laws and regulations enacted by the central government Thus the United States Federal Government has established 39 quarantine maritime stations These are all governed in the same manner, but there are three States which have maintained their own quarantine system which is imposed over and above the measures taken by the national government Indeed the law issued by the Treasury department and enforced by the Marine Hospital Service is regarded as the minimum The local governments of the States in which the ports are situated may add more stringent precautions but they cannot prevent or lessen the severity of the measures taken by the national—that is, Federal—Government

This legislation, at first directed against the foreigner has fortunately served as the thin edge of the wedge to obtain a commencement of legislation against the American himself It was very well to urge that yellow fever might be brought from Cuba or small pox from Europe but such evils might likewise be conveyed from one State to another within the Union Therefore and in time the law was gradually amended and extended, so that now the Supervising Surgeon General of the Marine Hospital Service shall see to the enforcement of the rules and regulations made by the Secretary of the Treasury to prevent the introduction of contagious or infectious diseases into the United States from foreign countries and into one State or territory or the District of Columbia from another State or territory Such rules are to operate uniformly and additional rules may from time to time be issued If the municipal or State authorities do not apply such regulations efficiently the national Government reserves to itself the right of appointing its own officials who will proceed to the place in question and enforce due observance of the rules Then another step was taken towards unification All State and municipal authorities and port sanitary authorities are now ordered to issue weekly reports on the sanitary conditions of ports and places within the United States and must also with the voluntary cooperation of all public bodies and associations and of private persons procure information relating to the climatic and other conditions affecting public health Thus the nation as a nation claims at least the right to inquire to know, and to record what is taking place within each State But there are no funds available by which the Federal Government could like our Local Government Board, send experts to various localities to hold courts of inquiry and to report to the Federal Government

It may also be noted that there are laws which give the Supreme Court of Justice sitting at Washington certain powers over local State courts The Supreme Court may order for instance the holding of trials in some other than the usual town if an epidemic prevails For the same reason the evacuation of a prison may be ordered and the conveyance of the prisoners to some other jail and town But what is still more to the point is the Act of March 27th, 1890 which confers on the Supervising Surgeon General of the Marine Hospital Service, under the direction of the Secretary of the Treasury the right to promulgate such rules and regulations as in his judgment may be necessary to prevent the spread of cholera, yellow fever, small pox or plague from one State or territory to another within the Union Any person violating such rules may be punished by a fine of not more than $500 and not more than two years imprisonment In practice precautions are taken mainly in regard to ships coming from abroad but the principle that such regulations may be applied within the Union itself is admitted The point however on which British or, in fact European sanitarians would insist is not so much the precautions necessary to prevent travellers spreading disease from one country or State to another country or State they would insist that by far the most important matter is the precautions taken to prevent the outbreak of any such disease This depends on the intelligence and activity of the local authorities and such authorities are not always particularly intelligent They are apt to be supine and many local interests and intrigues together with the fear of displeasing the local electors, combine to make them defer the carrying out of even the most obviously necessary sanitary measures Therefore some form of pressure from a greater and a higher authority is necessary It is the absence of such authority, with clearly defined and widespread powers,

[1] THE LANCET Nov 19th 1904, p 1451

which deprives Washington of the appearance of a capital. As I wandered along its very broad and half-empty streets or penetrated the Government offices where the officials anxiously disclaimed any responsibility or power to interfere with the affairs of the States that constitute the Union, I felt overwhelmed by the sense of surrounding emptiness. If I am intrusted with a mission or an investigation in France, Spain, or Italy I first of all, and quite naturally, proceed to Paris, Madrid, or Rome; but in America in similar circumstances there would be no particular necessity to go to Washington. Nevertheless, the need of some centralisation in regard to sanitary administration is so obvious that, though centralisation is opposed to the spirit of the American nation and constitution, it is, as indicated above, being gradually brought about, though in a somewhat circuitous manner.

Perhaps more has been done by the Department of Agriculture than by what should be called the Department of Public Health. Indeed, it would seem as if there was more readiness to legislate for the protection of property than of human life. Thus we have a law of March 3rd, 1891, entitled "An Act to Provide for the Inspection of Live Cattle, Hogs, and the Carcasses and Products thereof which are Subjects of Inter-State Commerce and for Other Purposes." By this Act and the amendments approved on March 2nd, 1895, the Federal Government may send its agents to inspect and to control slaughter-houses, canning, salting, packing, or rendering establishments, the products of which are to become subject of inter-State or foreign commerce. This is most important, particularly as the meats canned and preserved at Chicago are exported to every part of the world. It seems strange, however, that the Federal Government should have the right to prevent the slaughtering of cattle in a town or State if the rules which it has drawn up are not observed and yet the Federal Government has not the right to prevent a State enacting laws, as is the case with the State of Pennsylvania, by which people are forced to drink unfiltered water that obviously contains crude sewage. Then when, as a consequence of this abomination, epidemics of typhoid fever follow each other in rapid succession and thousands upon thousands of lives are uselessly sacrificed, as is amply demonstrated by the official statistics, the Federal Government sits with folded arms, says it has no right to interfere, and does not even possess the means of ordering an official inquiry to be held.

Nevertheless, the necessity of national control over local affairs is felt more and more and after putting cattle and meat under such supreme surveillance there is Section 4 of an Act of Congress dated July 1st, 1902, which is enacted "to regulate the sale of viruses, serums, toxins, and analogous products in the District of Columbia, to regulate inter-State traffic in the said articles, and for other purposes." In accordance with this Act regulations approved on Feb. 21st, 1903, were put into force on August 21st, 1903. These regulations forbid the sale of vaccine lymph, antitoxins, serums, and similar articles unless produced by licensed manufacturers working under the surveillance of inspectors appointed by the Federal Government. Of course, this inspection extends to the stables and every other department. Thus we get the principle of national control in certain matters of detail, such as the making of lymph and the canning of meat, but there is no means of forcing a town to have a proper water-supply or a proper drainage system. That the municipalities are not always effective administrators in such matters is amply demonstrated both by European and American experience. This should suffice to inspire the United States Congress with the desire to enact a public health law that shall apply to every part of the Union. In Europe the tendency is to assimilate the factory and sanitary legislation of the different countries and this should be a much easier matter between the various States which compose the United States of America.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Health of Calcutta.—The Plague Epidemic.—The Health of the Jails in India.—The Sanitation of Indian Cantonments.

IN the recent resolution of Government on the Administration Report of the Calcutta Municipality for the year 1903–04 it is very noticeable that the work of the health department is barely referred to. The great scheme of suburban drainage now under construction belongs to the engineering department, as also does the scheme for the conversion of the intermittent water-supply to a constant one. The reference to the ridding of Calcutta of many of the objectionable and insanitary "bustis" is a compliment to the work of the plague department. For the absence of precise figures to support the assertion that there has been an appreciable diminution of malarial fever in Calcutta during the last few years and upon which the special committee of the corporation complained it has appeared necessary to refer in the resolution to the report of the sanitary commissioner for Bengal. No comment is made concerning the food-supply, overcrowding mortality statistics, nuisances, vaccination, or the registration of deaths. Considering how much demolition has been going on it is surprising that no reference was made to the absence of provision for the displaced populations and that the extraordinary fatality amongst infants and the faulty registration of births were not even alluded to. The increasing death-rates from phthisis, pneumonia, bronchitis, and tetanus are particularly noticeable as well as the apparent decline in the number of deaths from asthma, liver disease, and spleen disease. I should like to have seen some notes made on these points in the health report which appears to me as a very meagre account of the work of an important department.

The plague mortality throughout India for the week ending Nov. 19th again fell, being reported at 14,115, as against 15,197 for the previous seven days, and as compared with 18,329 for the corresponding period of last year. Bombay City had 47 cases, against 79; Bombay Presidency 7124, as against 7603; Madras Presidency 386, against 398; Bengal 404, against 363; the United Provinces 2783, against 2476; the Punjab 1515, against 1357; Central Provinces 478, against 450; the Mysore State 565, against 557; Hyderabad State 474, against 925; Central India 278, against 364; and Kashmir 44, against 33. No mention is made of Poona city, which recorded 801 cases during October and in which the disease has been raging severely.

The review by the Government of India upon the reports of jails lays stress upon the improved rate of mortality. For 1903 it was 21·38 per 1000—a great change from 20 years ago, when it was 37 per 1000. It is obvious that no just comparison can be made with the rate amongst the general population so that the reference is useless. Malarial fever is the great cause of mortality and about 8 per cent. of the prisoners are returned as having suffered during the year. Government naturally does not accept the view that everything has been done to check its ravages. The punishment of solitary confinement seems to be having a wholesome effect and corporal punishment has been less frequently resorted to.

The sanitation of Indian cantonments is a matter which ought not, I consider, to be left any longer to the military authorities. In every cantonment there is always a large civil population which generally outnumbers the military and the native quarters constitute a permanent source of danger to the health of the troops. There is little to choose between the sanitary condition of the native quarters of a cantonment and that of an ordinary Indian town. I cannot but think that the native quarters should be kept away from, and entirely distinct from, the military quarters. If that were so less would be heard of the difficulty concerning sewage removal and disposal, there would be secured an improved state of surface purity, and the water-supply would not be so liable to contamination. The trench system of conservancy is only fit for a temporary camp not for a permanent barrack. Crude sewage should never be disposed of within the limits of the cantonment. There are many difficulties concerning the best methods of collection and removal where water in abundant quantity is not available. As cantonment funds are limited it is impossible under present conditions that the necessary expenditure for sanitary improvements can be incurred. On the other hand, I hold that the civil residents ought to be in the hands of a civil power. Every care may be taken to supply the troops with pure water and to have the regimental lines thoroughly scavenged, but so long as the existing form of sewage-disposal is continued and native quarters with a crowded, dirty population continue to be permitted in close proximity to the military lines there will continue those preventable diseases which cause such havoc in the British army.

Dec. 3rd.

MANCHESTER

(FROM OUR OWN CORRESPONDENT)

Precautions in a Dangerous Trade

A FEW days ago a firm of chemical and colour manufacturers was summoned under the Factory and Workshop Acts and the case was heard at the Manchester police court on Dec 14th In one of the processes white lead was an ingredient in the colour manufactured It was stated that the defendants had not obeyed the rules requiring that respirators, overall suits and approved sanitary drinks should be provided where dry white lead was used The chief inspector, Mr Lewis, had furnished a recipe for a drink consisting of sulphate of magnesia two ounces, water, one gallon, and essence of lemon sufficient to flavour One of the firm said that overalls and respirators were given to the men as soon as he heard they were necessary, that only one man had to use the dry lead and that on rare occasions, and that there was only another man in the department 'It would be difficult to carry on the business if everyone had to be muzzled with respirators' He gave the men a bottle and told them to drink the contents The inspector said that under the rules it was the duty of the defendants to see that the men took the drink He evidently has not the fear of the lecturer at the Manchester Physical Health Culture Society, whose views you gave last week, before his eyes The stipendiary pointed out that whilst there was a penalty for a workman refusing to wear the respirator and other articles, nothing was said about refusing to take the drink However, the defendants were fined 10s and costs as the magistrate considered there had been neglect Such cases as these show some of the difficulties in carrying out the precautions necessary in dangerous trades Sometimes the masters are careless and sometimes the men are stupid and obstinate and will not adopt protective methods And no doubt the wearing a respirator is unpopular and uncomfortable There is often great difficulty in works where lead is used to get the men to wash their hands before eating and painters do not often show much care in safeguarding themselves from the dangers of their calling

Poisoned by Gelsemium

At the assizes at Leeds on Dec 10th a grocer was charged with the manslaughter of a girl The story as reported is curious, for it is to the effect that the latter went to the shop to purchase fuller's earth The grocer said he [illegible] to try witch hazel In [illegible] the girl died shortly after [illegible] d there was no evidence of [illegible] by his advice returned a verdict of not guilty The report is probably imperfect for fuller's earth would certainly not have been bought to take internally, so that there seems to be no connexion between it and the witch hazel or gelsemium

Outbreaks of Small pox

On Dec 16th Mr H E Gough, medical officer of health reported an outbreak of small pox at Barnton, in the North wich rural district On Dec 8th a mother and infant both unvaccinated, were notified as having small pox and were taken to the hospital Another child from the same house was found to be affected and the father was convalescent from the disease Until the third week of his illness he had been going to his work There were three other small children in the house and the whole family was removed to the hospital On the following day a woman and her infant living next door but one had to be taken to the hospital This infant had been recently vaccinated and had only a slight attack, while an unvaccinated child died On the 11th another case was notified and removed From the way in which the outbreak originated Mr Gough thought other cases might occur and asked for the appointment of an emergency committee with power to erect new wards if occasion should arise It is stated in this morning's papers that small pox has again broken out at Darwen in Lancashire Seeing that small pox [illegible] able to so great a degree one [illegible] of this country will allow the [illegible] effectual means being taken to keep it in check

Housing of the Poor in Manchester

A Local Government Board inquiry was held at the town hall on Dec 7th with regard to an application of the city council to borrow £13 780 for the purchase of land in Cheetham Hill road and the neighbourhood It was intended to be utilised partly for housing purposes partly for the purposes of the education committee and also for the widening of Cheetham Hill road The application was supported by members of the council, by the city surveyor and by Dr J Niven, the medical officer of health He said that in the vicinity of Red Bank which, by the way is largely occupied by Jews the death rate from 1900 to 1902 was 49 per 1000 as against something like 20 per 1000 in other parts of the city The housing problem is not easily solved in Manchester unless at great cost

Dec 20th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS)

Winsley Sanatorium

ALTHOUGH the formal opening of the Winsley Sanatorium near Bath will not take place until the spring of next year patients are already being received for treatment At a recent meeting of the subscribers rules for the regulation of the institution were under consideration and one which had been framed by the committee of management to define the qualification of governors was vigorously opposed by the 16 representatives of the corporation of Bristol The committee proposed that a governor's qualification should be a donation of £21, or a donation of five guineas together with an annual subscription of one guinea or an annual subscription of two guineas The Bristol corporation has proposed to give a donation of £5000 and to subscribe £1300 annually and is entitled to have 20 patients in the sanatorium at one time These sums are calculated on the basis of the capital expenditure having been equal to £250 per bed, and of the estimated annual expenditure being £65 per bed The corporation representatives suggested that the votes of governors should be cumulative and that a subscription of two guineas should entitle to one vote, of five guineas to two votes, of ten guineas to three votes of 50 guineas to four votes and of each 100 guineas to six votes In the end this proposal was rejected by 17 votes to 18 with the result that at the meeting of the corporation held on Dec 13th it was decided to delay for the present borrowing the £5000 required for the capital contribution of the corporation The Local Government Board had already sanctioned this loan and the corporation had been recommended by the health committee to spread the repayment over 20 years and to give an undertaking as desired by the Board not to part with its interest in the sanatorium before the expiration of 20 years

Prosecution of an Unregistered Dentist

At the Cardigan police court on Dec 12th a man was fined 20s and costs for falsely taking and using the name of dentist without being registered in accordance with the provisions of the Dentists Act 1878 He stated in defence that he had a certificate of proficiency from an American college

West Wales Sanatorium

The foundation stone of the sanatorium for consumptives which is to be erected near Llanybther for the counties of Cardigan, Carmarthen and Pembroke, is to be laid on April 26th 1905 by Princess Christian Nearly £5000 have already been subscribed towards the building fund and about £200 yearly are promised for the maintenance of the institution It has been decided not to proceed with the actual building until a yearly income of £600 has been assured and it is anticipated that liberal contributions towards this amount will be given by the three county councils

The Medical Officer of Health of Glamorganshire

The finance committee of the Glamorgan county council has recommended that the salary of the medical officer of health (Dr William Williams) shall be increased from £750 to £900 per annum with an annual increase of £50 for the next two years Dr Williams has a travelling allowance of £200 yearly

South Devon and East Cornwall Hospital

At a meeting of the governors of the South Devon and East Cornwall Hospital, Plymouth, held on Dec 13th it was decided to alter the rule of the institution referring to

legacies, so as to enable the committee to use all legacies and donations received during the year, if required, for current expenses and deficits from previous years, unless otherwise directed by the donors. This may be a wise decision, as increasing the invested capital of a hospital when there are accumulating deficiencies in the annual accounts does not seem to be a business-like proceeding. At the same time it must be hoped that the public subscriptions will not diminish owing to any mistaken idea that the utilisation of the legacy income will obviate the necessity of continuing subscriptions.

Dec. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Parliamentary Representation.

A MEETING of the graduates of the Universities of Glasgow and Aberdeen was held at the Holborn Restaurant, London, on Dec. 8th, to hear an address from Dr. William R. Smith, the Rev. Canon D. Reith being in the chair. It was subsequently moved by Mr. T. B. Browning, seconded by Dr. J. Nelson Matthews, and carried:—

That this meeting of graduates of Glasgow and Aberdeen Universities cordially endorses the candidature of Professor William R. Smith, M.D., and pledges itself to use its best endeavours to secure his return.

Nursing Home for Gentlefolk.

A nursing home for gentlefolk in connexion with the Royal Scottish Nursing Association was opened on Dec. 5th by Her Royal Highness Princess Louise, Duchess of Argyll, at 20, Torphichen-street, Edinburgh. This home, which is specially intended to meet the needs of gentlepeople of limited means, can accommodate 13 patients. Each patient has a separate room and only the fully trained nurses of the Royal Scottish Nursing Institution are employed. There is a very complete operating theatre with all the latest scientific equipment and no effort has been spared to make the interior of the home both pleasing and comfortable.

The Royal Victoria Hospital for Consumption, Edinburgh.

His Majesty the King has graciously been pleased to grant the title "Royal" to the Victoria Hospital for Consumption, Edinburgh.

Dec. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

New Regulations of the Royal University of Ireland.

THE Royal University of Ireland has issued the following new regulations in reference to the final M.B. examinations:—

1. In the spring and again in the autumn of each year two separate examinations [illegible] candidates, only, the other for [illegible] must state at [illegible]

A candidate who has entered for the honou[illegible] [illegible]ination on giving to the secretaries [illegible] least one week before the commence[illegible]er no circumstances will a candidate who has entered for the pass examination be allowed to change to the honour examination.

2. Honour exhibitions will be awarded on the results of the honour examination only.

3. Candidates at the honour examination whose answering may not be such as to qualify them for honours may nevertheless be adjudged to have passed the examination provided they exhibit in their answers knowledge equivalent to what is required from candidates who satisfy the examiners at the pass examination.

The method of the examination for honours hitherto employed by the Royal University has been that the special examinations for honours have been held subsequently to the corresponding pass examinations. Those candidates only were allowed to be admitted to the honour M.B. examination who on a review of the results of their pass examination were considered by the examiners likely to prove themselves qualified to obtain honours and who were recommended to be admitted to the special examination, and honours and exhibitions were awarded on the aggregate of the honour marks and half the pass marks obtained in all the subjects that form part of the examination, and honours were awarded only on the subjects of the M.B. examination taken as a whole. In other words, as a result of the pass M.B. examination a few of the candidates who had shown special excellence were allowed to proceed to the honour examination which was held subsequently to the pass and was exactly of the same nature and covered the same subjects. At a meeting of the Belfast Medical Students' Association, held in the Union, Queen's College, Belfast, on Dec. 15th, a motion was carried disapproving of these new regulations and it was decided to communicate with the students of the other Irish medical schools affiliated with the Royal University asking their views so that perhaps an alternative scheme might be put forward.

Prevention of Tuberculosis.

The fourth annual meeting of the Dublin branch of the National Association for the Prevention of Tuberculosis was held on Dec. 14th at the Royal College of Physicians of Ireland, the Lord Mayor of Dublin occupying the chair. There was a large attendance. Dr. Alfred E. Boyd, honorary secretary, read the annual report which stated that:—

The total number of deaths caused by tuberculosis in its many forms in Ireland during 1903 was 12,180, representing a rate of 2·8 per 1000, whilst in 1902 the rate was 2·7. Of the 12,180 deaths, consumption was responsible for 9559, corresponding to a rate of 2·2 per 1000 of the population. Of these deaths 4667 were of males and 4892 were of females. Of the males who died from consumption during the year, 64 per cent., and of the females, 58 per cent., were between the ages of 20 and 45 years. During 1[illegible] twice as many deaths as were caused [illegible] whooping-cough, measles, typhoid, and [illegible] of these figures the fact was deplored [illegible] death rate from this cause is being lo[illegible] imperfectly understood and adopted in Ireland.

Dr. W. J. Smyly, President of the Royal College of Physicians of Ireland, in proposing that the report be adopted, said that it was astonishing that the public did not take a greater interest in the prevention of tuberculosis, for those 12,180 people who died in 1903 were not old and feeble but generally in the prime of life. The Lord Mayor seconded the adoption of the report and stated that in reference to the appointment of a city bacteriologist the corporation was willing but the Local Government Board informed them that they had not the power at present. He felt sure that the corporation would endeavour to obtain those powers at the first opportunity. Mr. Thomas Edmundson, in proposing a motion in reference to making consumption a notifiable disease, said that it was lamentable to see the disease increasing in Ireland whilst in England and Scotland it was decreasing. He said that Sheffield should be complimented on getting Parliamentary sanction for compulsory notification. Professor E. J. McWeeney, in seconding the motion, said that in order to form a just idea of the evil which they wished to combat it was only necessary to consider the statistics of deaths in Dublin from other infectious diseases during the past year. Measles caused 32 deaths, scarlet fever 38, typhus fever eight, whooping-cough 128, diarrhœa and dysentery 128, small-pox 34, and consumption just 1000. The deaths due to other infectious diseases were mostly those of young children, whereas the majority of those who died from consumption had attained the reproductive age—the age of active citizenship.

The Condition of the Poor in Belfast.

At the present time, owing to the existence of distress due to depression of trade, attention is being specially directed in Belfast to the condition of the poor and several philanthropic schemes are being utilised as means of help. An inquest held on Dec. 14th as to the death of a woman who fell down the stairs in a house in Boyd-street has lifted the curtain and revealed a terrible state of affairs. It appeared that in the houses in this street there were no yards or back passages or any sanitary convenience whatever. Slops and filth of every kind were thrown out on the public street. A medical man who was examined said he did not think that any house in the street was properly fit for habitation. There was only one sleeping room in this particular house and two families of five persons altogether slept in it and there were no beds but simply what are called "shake-downs." The jury in a rider called the attention of the public authority to the condition of the houses in the street.

Dec. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Action of Metallic Ferments on Metabolism, especially in Pneumonia.

AT the meeting of the Academy of Medicine held on Dec. 6th M. Albert Robin read a most interesting paper showing that metals in a state of infinite division have a

marked physiological action and that altogether disproportionate to the quantity of the metal employed M. Robin has studied the effect of these finely divided metals acting in the same manner as soluble ferments The hypodermic injection of solutions which contain a few deci milligrammes *(quelques dix millièmes de gramme)* of a metal such as palladium, gold, silver, or platinum has a marked effect. M Robin noted an increase in the urea, of the coefficient of the utilisation of nitrogen, and of the uric acid There were also noted a discharge of urinary indoxyl, an increase in the total quantity of oxygen utilised, with a corresponding lowering of the output of carbonic acid, an elevation of the respiratory coefficient and of the vascular tension, together with increased leucocytosis From these observations M Robin was enabled to draw conclusions as to the changes which albumin undergoes in the economy Taking into consideration the chemical phenomena of the febrile crisis and those which are brought about by the injection of metals he considered that these metallic ferments could assist the defence of the organism against infections and more particularly that of pneumonia. Under the influence of these ferments the critical fall of temperature appears at an earlier date than usual, but the local pneumonic phenomena take place as usual while the polyuric crisis occurs later than usual. The ferments have no action upon the actual pneumonic lesion In other infectious maladies the results are less marked

Inoperable Recurrent Cancer of the Breast Treatment by Radiotherapy.

At the meeting of the Society of Surgery which was held on Nov. 30th M. Lejars showed a patient on whom he had operated [illegible] three years ago for cancer of the breast
recurrence [illegible]
a second recurrence and operation was this time considered out of the question. M. Lejars sent the patient to M Béclère who employed x ray radiotherapy with an unhoped-for result After eight months of treatment the patient now shows no sign of cancer, the nodules have disappeared, the ulcers have healed, and the skin over the affected region is clean and supple M Béclere, who was present at the meeting, gave the society some figures of cases of cancer of the breast treated by radiotherapy In all 44 cases were dealt with which could be divided into three categories. In 23 cases of recurrent inoperable cancer of the breast radiotherapy caused the nodules to disappear and the superficial ulcerations to heal but it had no effect upon the deep lesions and the affected glands and all the patients died sooner or later from cancer The second class comprised 18 cases which had never been, and could not be, operated on In these the results of the treatment were the same as in the previous class, Finally, three cases were treated in which the disease was quite recent but the treatment was as yet too recent for any definite deduction to be drawn

Stall Keepers and the Hygiene of the Streets

A matter of great interest to public health is much to the fore at present—namely, the question of foodstuffs sold from stalls in the streets. The Medical Society of the 16th Arrondissement of Paris is much concerned thereat From the point of view of freedom of traffic there is every reason to ask that no stall for merchandise should be allowed on any footway which is less than two metres wide, and, moreover, from the point of view of public health, it should be made compulsory on the licence holders—those at least who sell foodstuffs—to sweep the pavements where their stalls are placed very frequently, so that the asphalt may be cleansed from fragments of vegetables, meat, fat, or any other material of a greasy or putrescible nature Another danger arises from the outside leaves of vegetables or skins of fruits causing passers by to slip and to fall, for banana skins and the like are freely scattered on the pavement The space underneath the stalls serves as a receptacle for every kind of rubbish which is not seen but which makes the asphalt dirty Every evening, then, when the shops are shut the asphalt ought to be washed with plenty of water and scrubbed so as to remove all fatty or putrescible matter Another point is that stalls for the sale of food stuffs are generally dressed just at the time when the dung boxes are being emptied into the dust carts so that particles of manure are widely distributed through the air Also at the same time carpets are beaten or shaken out of the windows, so that it is obvious that the food stuffs run every chance of being covered with dust which may be full of pathogenic germs The society has passed a resolution that the stall-holders should take fresh measures of precaution, that the hygienic condition of the streets should be carefully looked after, and that samples of food exposed for sale in the street, especially of fruits and vegetables which are meant to be eaten uncooked, should be examined from time to time in the municipal laboratory

Boric Acid Poisoning

Although symptoms of acute poisoning rarely follow the administration of a large dose of boric acid, it is nevertheless the fact that repeated doses of boric acid continued for several days may produce toxic effects These effects usually appear at the end of the third or fourth day when the organism has become saturated with the substance whether by constant absorption, by non elimination, or by imperfect elimination M Chevalier has stated to the Therapeutical Society that he has collected in medical literature 22 cases of poisoning certainly caused by this drug The symptoms followed the use of boric acid either in the form of powder in dressings, or as a solution employed in enemata and in washing out the pleura, the stomach, or the bladder Poisoning by boric acid which has been taken by th [illegible]
to cases of chronic poisoning
been investigated experimen [illegible]
these circumstances boric acid [illegible]
acts chiefly on the general nutrition, and requires much time for the production of really serious symptoms The general conclusion is that boric acid is capable of producing dangerous pathological effects under certain conditions which are as yet imperfectly understood and that it ought not to be considered as a quite harmless substance M Chevalier added that boric acid was usually difficult of absorption, a property which accounted for its low degree of toxic power On the other hand, it was under normal conditions easily eliminated in the urine and other excretions but if the power of elimination was defective it accumulated in the system

Legal Responsibility of Surgeons

The Chambre des Requetes de la Cour de Cassation has recently decided that if after a child has been circumcised in his own interest *(dans son propre intérêt)* he presents a slight deformity which might pass off naturally, the surgeon of the hospital department to which the relatives have taken the child is not responsible for the result, even though he may have erred in intrusting the operation to a person unqualified for such work Neither is this substitute himself responsible, provided that the operation has been properly performed with all the precautions of modern surgery and provided that the ultimate mishap is of the class to which everyone is exposed who has to submit to the removal of a portion of the body

Risks connected with the Certifying of Mental Cases.

Dr Laurans, an elderly medical man who has for 40 years been practising in a working class quarter of Paris, has recently had a very disagreeable experience in having to appear in a police court on a charge of being accessory to an assault *(inculpation de complicité de violence)* The complainant was a woman who had at the instance of her husband been placed under restraint as an uncontrollable lunatic on a medical certificate signed by Dr Laurans In reality the woman was a drunkard, had a very violent temper, and was in the habit of quarrelling and fighting with her husband who was a liquor seller and given to drink. After an unusually furious encounter the husband asked the commissary of police to put his wife under restraint as in his opinion she was out of her mind The commissary replied that he could not do so unless she were certified by a medical man to be an uncontrollable lunatic The husband then consulted Dr Laurans, whom he had not previously known, although they both lived in the same neighbourhood Dr. Laurans visited the patient and finding her to be a woman of fierce aspect, with staring eyes, uttering threats or unintelligible sounds in her drunken frenzy, did not hesitate to give the certificate which was asked for The commissary then had the woman taken, in accordance with the usual practice with insane persons, to the infirmary of the prefecture of police Here she was examined by Dr Garnier, an alienist, who kept her in bed, gave her milk diet, and discharged her when the alcoholic excitement had passed off, as she was

found to be not really insane. Having returned home, the woman on the advice of her brother brought a charge against her husband of having caused her to be forcibly placed under restraint, a proceeding which the law describes as an assault (*violence*), and at the same time she charged Dr. Laurans with being an accomplice. Dr. Laurans therefore appeared in the police-court, where the woman's legal representative argued that he had given a certificate merely because he was asked to do so (*certificat de complaisance*), as his examination of her lasted only five minutes. The circumstances of the case have received much attention from the medical societies of Paris, for practically Dr. Laurans had done all that was required of him, as the state of violent and dangerous alcoholic delirium in which the woman was when he saw her was sufficiently evident not to require a long investigation. A quite similar mischance might happen to any medical man, and if Dr. Laurans were convicted no practitioner would consent to sign a certificate for the placing of a dangerous lunatic under restraint if he would thereby himself incur the risk of imprisonment. At the trial this argument was brought forward on behalf of Dr. Laurans who was fortunately acquitted. In the discussions which took place at the medical societies on the subject the general feeling was that in such circumstances it would be advisable for a practitioner to obtain the assistance and coöperation of another medical man. Only one medical man is required by law, but the presence of two would prevent the imputation that an opinion had been given inconsiderately or from a mere desire to oblige the person who asked for the certificate.

Dec. 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Army Medical Academy.

THE annual celebration of the foundation of the Army Medical Academy took place not long ago and presented an animated scene, the company including many professors of the University of Berlin and medical officers of high rank. According to the report given by the director of the academy and quoted by the daily press, the staff of the academy includes 44 army medical officers as teachers, assistants, and inspectors. The number of students is 312, and in addition to them there belong to the academy 158 Unterärzte, or students to whom a military rank has been already granted. The Unterärzte partly act as dressers or in other capacities in the Charité Hospital and partly are preparing for the State examination. The students attend the lectures of the medical faculty of the university in addition to special courses delivered to them within the academy. Post-graduate lectures for members of the army medical corps, especially those in provincial towns, were delivered in courses of four weeks' duration and were attended by 132 army medical officers. The academy is lavishly provided with laboratories and other means for scientific research and has a library of 62,000 volumes.

Professor Robert Koch.

On Dec. 11th a dinner was given to Professor Koch to celebrate the sixtieth anniversary of his birthday. A great many of his former assistants attended, including Professor Brieger, Professor Löffler, Professor Gärtner, and others. All the members of the Institution for Infectious Diseases were present. The Government was represented by the Under Secretary of State, Herr Wever, the army by General Staff Surgeon Dr. Leuthold and many other members of the army medical corps, and the medical faculty of the University of Berlin by Professor von Bergmann and others. Professor Koch's health was proposed by Professor Gaffky who eulogised the services which the guest of the evening had rendered to science and to the general welfare of humanity. In his reply Professor Koch said that the development of bacteriology and hygiene was very gratifying and he expressed his thanks to all his former and present assistants who had aided him in his work. On Dec. 20th he will leave Berlin where he has made only a short stay and will proceed to German East Africa for the purpose of studying cattle disease and other tropical epidemics. It is expected that he will be abroad for about six months.

Russian Surgeons and Japanese Critics.

In THE LANCET of July 23rd, p. 258, I gave a *résumé* of an article contributed to the *Deutsche Medicinische Wochenschrift* by Dr. Wada, fleet surgeon in the Japanese navy, on the treatment of the Russians wounded at the battle of Chemulpo. This article, in which the proceedings of certain Russian and French surgeons were rather severely criticised, has caused Dr. Banschtikoff, junior surgeon of the Russian cruiser *Variag*, to publish a reply in the same periodical. To illustrate the enormous difficulties which the surgeons had to overcome during and after the battle he gives an interesting description of the state of things on board the French cruiser *Pascal* to which the wounded had been conveyed from the *Variag*. Not less than 42 wounded sailors, of whom 23 had very grave injuries, and 41 unwounded men went on board the *Pascal*. Whilst the French and Russian surgeons were dressing the wounds and performing the necessary operations the whole crew of the *Korietz*, consisting of 166 men, were taken on board the *Pascal* because of the *Korietz* being abandoned. On the next day about 100 members of the Russian colony of the place with their servants, and finally the Imperial Russian mission from Seoul, found a shelter on the *Pascal*, so that this rather small vessel was overcrowded to excess. As the transhipment of the wounded had to be done very quickly there was no time to take fresh clothes and linen with them, so that in some of the more serious cases the French officers and men gave articles of their own clothing to the patients. In spite of the overcrowding the French were able to give sufficient food and wine to all the wounded. Three medical men, two Russians and one Frenchman, performed a number of operations on board the *Pascal* in circumstances of the greatest difficulty in a small room near the ship's hospital; seven operations (of which five had to be undertaken without anæsthesia on account of the bad state of the patients) were performed during the night of Feb. 9th and 19 other operations as well as numerous dressings during the following three days. Finally the stock of dressing material became nearly exhausted. Dr. Banschtikoff states that the wounds of entrance were of an irregular and not of a circular form, the surrounding tissue being greatly contused. In the majority of cases fragments of shell were found within the fractured bones together with pieces of dirty cloth. Apart from three amputations the operative measures consisted in disinfection of the wounds and removal of the fragments of shell and bone. The necrotic parts were eventually cauterised by the thermo-cautery and the wounds were plugged and covered with iodoform gauze. Finally moistened cotton-wool and caoutchouc tissue, and in cases of fracture splints of pasteboard, were applied. Dr. Banschtikoff remarks that although the French and Russian surgeons did their best the overcrowding on board the *Pascal* did not allow sufficient care to be given to the wounded. The offer of the Japanese authorities to convey the patients ashore to the Red Cross hospital was therefore received with great satisfaction. In that hospital they were treated by the Japanese with the utmost kindness and skill and the majority made a good recovery. At the same time he feels obliged to state that the first aid given to the men was of signal service to them and that the unfavourable conditions above described were inevitable. He contradicts a statement made by Dr. Wada to the effect that the Russian medical men were so perplexed at the beginning of the action that they had some difficulty in attending to the wounded and he declares the fact that nearly all the serious wounds were properly dressed while the action was proceeding, so that the surgeons from the war vessels of other nationalities who arrived immediately afterwards on board the Russian cruiser had to treat the slighter cases only.

Dec. 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Milk Supervision Bill, Victoria.

SOME months ago the Board of Health of Victoria prepared a Milk Supervision Bill. It was then considered by a conference of municipalities and agreed to. Since then the Minister of Health (who represents a country constituency where dairying is the principal industry) has had the Bill in hand and has so modified it as practically to nullify its action and, further, has taken no steps to introduce it into

the House. At the last meeting of the Board of Health it was stated —

The matter has also been considered by some of the municipal councils who have resolved to call a conference of delegates and to urge the Minister to introduce the Bill as originally drafted and to get the Members of Parliament for their districts to ask the Minister for definite statements on the subject.

Proprietary Medicines

Representatives of the Federal Chamber of Manufacturers recently waited on the Minister of Customs and presented a petition requesting him to prohibit the importation of articles which were deleterious to health because of false descriptions or because the packages containing drugs did not specifically set out on the labels that poisons entered into their composition They quoted from a report recently prepared by a Royal Commission which stated that a large number of proprietary medicines, advertised and sold under deceptive names, contained poisons more or less virulent, as opium, nux vomica, ergot of rye, chloroform, aconite, arsenic, mercury, and bromides of sodium and potassium. The Minister replied that once goods were brought into Australia his department had no supervision over them He assured the members of his entire sympathy and hoped that something would be done by the State governments to check the evil complained of.

Hospital Affairs.

The Queen Victoria Infectious Diseases Hospital at Melbourne became notorious for delays and mismanagement before it was opened. Now that after years of delay it has been opened the admission of patients appears to be hampered extraordinarily. Only a certain number of municipalities agreed to maintain and to control the hospital Before a patient can be admitted an order must be obtained from the town clerk of the municipality in which the patient resides as well as a medical certificate that the case is one of either diphtheria or scarlet fever. The municipalities that refused to join in the maintenance of the hospital have to undertake to pay for cases residing in their districts Recently a case of diphtheria occurred at Northcote, the municipality of which does not contribute, and the town clerk would not give an order Consequently a day's delay occurred and the child died, leading to inquiry and discussion Many cases are taken to the Melbourne Hospital first and to avoid delay in admission to the fever hospital its committee has recommended the town clerks of the municipalities to leave a number of signed orders with the superintendent of the Melbourne Hospital —The new pavilions, known as the Queen Victoria pavilions, at the Royal Prince Alfred Hospital, Sydney, were formally opened with great ceremony by the governor of New South Wales on Oct. 20th The original buildings were so designed as to allow of a gradual expansion, radiating from the central administrative block It was opened in 1882 with 146 beds In 1886 the number was increased to 161 and in 1887 to 224 In 1894 the beds were again increased to 236 By the addition of the Queen Victoria pavilions the total accommodation is raised to 456 beds, making the hospital the largest in the southern hemisphere His Excellency also unveiled two statues on the pediments of the pavilions, one of the late Queen Victoria and one of the late Prince Consort —At the Melbourne Hospital considerable discussion has taken place concerning contributions from patients For some years it has been the custom to exact from patients whatever they can afford to contribute It is alleged that this leads to preferential treatment and that timid patients would not attend because they were unable to contribute The chairman stated that last year 3340 patients contributed nothing and no pauper patient was ever refused because of inability to contribute The report of the finance committee recommending a continuance of the present system was adopted — At the Women's Hospital, Melbourne, the committee and the medical staff have again come into conflict over the appointment of a resident medical officer The committee requested a conference with the staff to discuss the qualifications of applicants for a vacant position The staff replied by recommending one of the applicants and would not meet the committee The staff claims the right of making the appointments to the resident staff.

Friendly Societies and Hospital Staffs

At Armidale, New South Wales, a difficulty similar to the recent dispute at Balmain was threatened Dr Clune accepted the position of medical officer to certain benefit [illegible] pronounced by the New South Wales branch [illegible] ritish Medical Association "inimical to the interests [illegible] ofession" Consequently no member of the branch could meet Dr Clune. Dr Clune applied for a position on the medical staff of the Armidale Hospital The medical staff stated that they would resign if he was appointed A motion that Dr Clune should be appointed was rejected by the hospital committee by ten votes to eight It was stated in the course of the discussion on the motion that the friendly societies would withdraw their financial support if Dr. Clune was not appointed

Charge of Murder against a Medical Man. Acquittal.

Dr W O Eichler of Sydney was tried for the murder of a girl by procuring criminal abortion, resulting in death from septic peritonitis The dy [illegible] cated the accused as the [illegible] operation The judge said [illegible] of the act having been committed by Dr Eichler and the jury returned a verdict of "Not guilty."

Appointment of Medical Officer to the Water and Sewage Board, Sydney.

Dr E S Stokes has been appointed medical officer and bacteriologist to the Metropolitan Board of Water supply and Sewage, Sydney Dr Stokes is a graduate of the University of Sydney. In 1891 he obtained the degrees of Bachelor of Medicine and Master of Surgery and has held the position of resident medical officer at both Sydney and Prince Alfred Hospitals He obtained the Diploma of Public Health of the Royal Colleges of Physicians and Surgeons of Ireland, passing the examination with honours.

Nov 14th

Obituary.

DAN ASTLEY GRESSWELL, M D OXON., M D. MELB, D P H CANTAB,

CHAIRMAN OF THE BOARD OF PUBLIC HEALTH, VICTORIA, AUSTRALIA.

Dr. D Astley Gresswell, who died in Melbourne on Dec 10th, had for many years occupied a prominent position among the medical profession in that city. He was a native of Louth in Lincolnshire, where he was born on Sept 11th, 1853, being the second son of the late Alderman D Gresswell, at one time mayor of the town Dr Gresswell's professional education was received at the University of Oxford and St Bartholomew's Hospital At Oxford he held an open scholarship at Christ Church, he was essentially a reading man but was nevertheless proficient in some forms of athletics, especially in sculling In 1881 he graduated as M B and in 1889 as M D, in 1881 he also took the diploma of M R C S Eng and in 1884 that of D P H Cantab At St Bartholomew's Hospital he held the appointments of house physician and assistant demonstrator of physiology. His subsequent work was chiefly concerned with the subject of infectious diseases and preventive medicine He was a careful and unwearied observer of all advances made in our knowledge of this diversified field and from his wide general culture no less than from his sound knowledge of medicine he was well fitted to form a [illegible] In the infectious hospitals of [illegible] abundant opportunities [illegible] ities which he conscientiously [illegible] or a time on the medical staff of the Board's [illegible] Hospital at Stockwell On leaving there he obtained an appointment in the emigration service which required him to proceed to Australia in a sailing ship and while on this voyage he did work in connexion with which he received assistance from the scientific grants committee of the British Medical Association, this committee of the British Medical Association, this consisted in the collection of observations and material for an article ten pages in length published in the *British Medical Journal* of July 26th, 1884, under the title of "Report on Some Organic Phenomena in their Relation to Changes of [illegible] a Voyage round the World [illegible] return to [illegible] inspectors [illegible] one of [illegible] of serious

of cholera which might be brought from foreign ports where it was known to exist. He afterwards investigated local outbreaks of disease and pointed out that a convalescent from diphtheria might continue to be a source of infection for a much longer period than was generally recognised. One of his reports is noticed in THE LANCET of Oct. 19th, 1889, p. 819. In 1887 he again joined the medical staff of the Stockwell Hospital, induced mainly by the prospect of collecting material for his M.D. thesis which was entitled "A Contribution to the Natural History of Scarlatina." The thesis was considered to be of sufficient merit to be published by the University in book form and it was reviewed in THE LANCET of Feb. 28th, 1891, p. 491. His intimate knowledge of sanitary work and preventive medicine having obtained for him an appointment in connexion with the Board of Public Health of the colony of Victoria he left England in 1890 and thenceforward made his home in Melbourne. Dr. Gresswell has three younger brothers in the medical profession. In 1883 he married Miss Agnes Neill who survives him.

Medical News.

UNIVERSITY OF OXFORD.—In a Congregation held on Dec. 17th, the last day of Michaelmas term, presided over by the Vice-Chancellor (Dr. Merry, Rector of Lincoln College), the following degrees were conferred :—

M.D.—H. P. Cholmeley and E. Mallam, Magdalen.
M.B. and B.Ch.—E. Burstal, Trinity; R. A. Chisolm, Wadham; and H. R. Dean, Magdalen.
D.Sc.—T. C. Porter, Exeter; and H. B. Baker, Christ Church.

At examinations held recently the following candidates passed in the subjects indicated :—

FIRST M.B. EXAMINATION.

Organic Chemistry.—P. P. W. Andrews and T. B. Batchelor, University College; A. W. Burnyeat, Queen's; D. C. Dobell, Christ Church; H. J. B. Fry, Magdalen; C. Gouldesborough, Christ Church; H. P. Newsholme, Balliol; J. A. Noble, Queen's; E. W. M. Phillips, Jesus; J. Wallace, Exeter; and T. S. Wright, Brasenose.
Human Anatomy and Human Physiology.—M. B. Baines, Exeter; R. Evans, Jesus; F. Howson, non-collegiate; G. H. Hunt, Christ Church; and W. W. Wells, Merton.

SECOND M.B. EXAMINATION.

Pathology.—L. T. Barra, University College; R. A. Chisolm, Wadham; T. Harris, non-collegiate; R. Jamison, Trinity; L. J. J. Orpen, Keble; J. E. Rutherford, Corpus Christi; H. C. G. Semon, Magdalen; C. A. Smallhorn, Wadham; B. H. Spilsbury, Magdalen; H. L. Tidy, New; and E. H. White, University College.

FINAL EXAMINATION.

Medicine, Surgery, and Midwifery.—A. W. Brodribb, University College; E. Burstal, Trinity; R. A. Chisolm, Wadham; H. R. Dean, Magdalen; H. Frankish, Worcester; J. Freeman, University College; A. H. Hogarth, and R. H Sankey, Christ Church; C. J. Singer, Magdalen; E. McL. Smith, Queen's; P. F. Tinné, Magdalen; and J. A. Vlasto, New.

UNIVERSITY OF CAMBRIDGE.—At examinations for medical and surgical degrees held in Michaelmas term the following satisfied the examiners :—

FIRST EXAMINATION.

Part I., Chemistry and Physics.—W. A. Anderson, Clare; W. Boys-Stones, Caius; W. T. Chaning-Pearce, Emmanuel; W. N. Child, B.A., Christ's; H. C. Davis, Clare; M. E. Dellschaft, Jesus; E. V. de Souza, Downing; C. A. Dottridge, Clare; A W. Gaye and A. H. Gosse, Caius; H. G. Greaves, Emmanuel; C. C. Harrison, Caius; J. Harrison, R. Heaton, and G. C. Kidd, Christ's; N. F. Lock, Caius; C. H. Maxwell, Christ's; C. C. Messiter, Caius; B. L. Miles, Pembroke; G. R. Mines, Sidney Sussex; C. G. H. Moore, Caius; A. F. Morcom, Clare; J. D. Morgan, B.A., Trinity; C. G. H. Morse and N. Mutch, Emmanuel; J. H. Newmarch, Pembroke; H. B. Richmond, King's; A. Sandison, Trinity; F. D. Sauer, Christ's; F. P. Saunders, Clare; A. S. Seabrooke, Christ's; J. E. S. Sheppard-Jones, Magdalene; W. Shipton, B.A., Caius; R. C. Staples-Browne, B Stott, Trinity; W. W. C. Topley, St. Jo[illegible] Caius; L. C. Walker, Christ's; J. M. Wallace and M. H. Whiting, Downing; and H. F. Wilson, Christ's.

THIRD EXAMINATION.

Part I., Pharmacology and General Pathology.—P. H. Bahr, B.A., Trinity; J. Barcroft, M.A., King's; J. W. B. Bean, B.A., H. Selwyn; E. Beaton, B.A., Caius; G. G. Butler, B.A., Emmanuel; R. N. Chopra, Downing; H. N. Coleman, B A., Christ's; L. Courtauld, B.A., Trinity; F. D. Crew, B.A., Emmanuel; A. J. W. Cunningham, B.A., Trinity; A. W. C. Drake, B.A., Pembroke; J. R. Draper, B.A., St. John's; E. G. Fearnsides, Trinity Hall; W. J. Fison, Sidney Sussex; G. B. Fleming, B.A., King's; C. F. Fothergill, B.A., Emmanuel; F. Gayner, B.A., King's; B. C. Ghosh, M.A., St. John's; C. W. Greene, B.A., Emmanuel; J. W. Grice, B.A., King's; J. M. Hamill, B.A., and G. A. F. Heyworth, B.A., Trinity; W. D. Hopkins, B.A., Trinity Hall; A. F. Jackson, Peterhouse; A. R. Jordan, B.A., Clare; H. E. Kitchen, B.A., Sidney Sussex; C. N. le Brocq, B.A., Pembroke; R. B. Lloyd, B.A., Emmanuel; T. C. Lucas, B.A., Clare; S. G. Luker, B.A., Pembroke; R. G. Markham, B.A., Caius; C. D. Mathias, B.A., Trinity; A. W. Moore, B.A., Emmanuel; E. V. Oulton, B.A., Christ's; John H. Pratt, B.A., Trinity; R. Puttock, B.A., and A. C. H. Rothera, B.A., Emmanuel; C. E. F. Salt, B.A., Pembroke; R. B. S. Sewell, B.A., Christ's; A. L. Singer, B.A., King's; P. J. Verrall, Trinity; K. M. Walker, B.A., Caius; E. G. Wheat, M.A., Christ's; A. B. Wilson, B.A., Pembroke; F. L. Woods, B.A., Caius; and R. F. Young, B.A., Christ's.

TRINITY COLLEGE, DUBLIN.—At the final examination in surgery in Michaelmas term the following were successful :—

Eva J. Jellett, Hugh Stewart, William Hassard, Thomas Creaser, Robertson S. Smyth, John Cunningham, Richard Kelly, Arthur A. M'Neight, Charles E. Fawcett, Thomas J. T. Wilmot, Thomas Wilson, Gerrard A. Crowley, Keith R. C. Hallowes, and William J. M'Ivor.

PLYMOUTH BOARD OF GUARDIANS.—At a meeting of the Plymouth board of guardians held on Nov. 23rd it was decided that a new infirmary should be erected on the site occupied by the garden adjoining the workhouse.

BRISTOL MEDICAL MISSION.—The annual meeting of the friends of the Bristol Medical Mission was held on Nov. 24th. The medical report stated that during the past 12 months 8000 patients had been treated at the dispensary, including 1640 who had been attended at their own homes. The financial statement was satisfactory.

REMUNERATION OF POOR-LAW MEDICAL OFFICERS.—At a meeting of the Falmouth board of guardians held on Nov. 24th it was decided to increase the salary of Mr. C. C. Bullmore from £28 to £40 per annum. Mr. Bullmore stated that during the ten months he had been district medical officer he had paid 200 visits and dispensed 1400 bottles of medicine, which at 6*d.* a bottle would cost more than the amount of the salary which he was receiving.

DONATIONS AND BEQUESTS.—By the will of Mrs. Isabella Lucy Bishop £1000 are bequeathed to the Edinburgh Medical Missionary Society; £500 to St. Mary's Hospital, Paddington; £500 to the Zenana Bible and Medical Mission; to the Church Missionary Society £1500, £1000 of which are to be invested and the income applied towards the permanent endowment of the John Bishop Memorial Hospital at Kashmir, India, while the income from the remaining £500 is to be applied in aid of the permanent endowment of the Medical Missionary Hospital at Hung-Chow, China; to the Edinburgh Medical Missionary Society a further sum of £800, to be applied in founding and endowing a bursary to be called "The John Bishop Bursary," to be competed for annually by students of the society; to the China Inland Mission £500, the income to be applied in aid of the permanent endowment of the Henrietta Bird Memorial Hospital, Pooning-fu, China; and £500 to the United Free Church of Scotland, the income to be applied in aid of the permanent endowment of the Medical Mission Hospital at Mukden, Manchuria.

THE BONA FIDES OF ADVERTISEMENT CHALLENGED IN THE LAW COURT.—What an admirable institution would be in this country a special tribunal to settle questions raised as to the truthfulness of the statements appearing in advertisements. Such a tribunal evidently exists in Germany, according to the following case. It appears that during the course of the past year Jeyes' Sanitary Compounds Company has been advertising in certain German newspapers that creolin sold by Mr. William Pearson was not of its manufacture and that the fluid which it now makes (cyllin) is four times the strength of that which it formerly sent to Germany as "creolin," while it was free from carbolic acid. In consequence of these statements Mr. Pearson took action against Messrs. Jeyes in the district court of Hamburg on the grounds of unfair competition. The court referred the matter to the Hygienic Institute of the city, the questions submitted being: (*a*) Whether the defendants have succeeded, by means of experiments extending over many years, in quadrupling the bacteria-destroying properties of the fluid in question; and (*b*) whether cyllin is 11 times stronger than pure carbolic acid. Dr. Kister of the Hygienic Institute was deputed to examine a series of samples and submitted an exhaustive report embodying tables showing the results of bacteriological experiments with "cyllin," "creolin," "Jeyes' perfect purifier," "Jeyes' fluid," and carbolic acid, by British and German methods, typhoid culture being used. He answered questions (*a*) and (*b*) in the affirmative. The

district judge and two commercial judges have recently given their decision in the case. They dismissed the plaintiff's claim and ordered him to pay five-sixths of the costs. In their grounds for the judgment the judges relied upon Dr. Kister's report, which was in favour of the defendants, and they rejected the plaintiff's allegations that the defendants had added poisonous mixture to "cyllin."

BOOKS, ETC., RECEIVED.

JOHN BALE, SONS, AND DANIELSSON, LIMITED, 83, Great Titchfield-street, Oxford street, W.

Bale's Dental Surgeon's Daily Diary and Appointment Book. 1905. Price 7s.

The Channels of Infec the Con- ditions, original or nt Issues Vulnerable. Being 1903 By Hugh Walsham, M ysician to Out patients, form f London Hospital for Disea it in the Electrical Departm sl. Price 12s. 6d. net.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

nereal Diseases and ., Clinical Professor of Physicians and rk. Third edition, thoroughly revised. Price 28s. net.

The Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, A.M., M.D., President of the American Gynecological Society; Professor of Gynecology, North-Western University Medical School. Fourth edition, revised. Price 25s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

ted from the Hon Board of appointed on Opera Surgeon ict of the

HUNTER, JESSIE SOPHIA BEATRIX, M.B., Ch.B. Glasg., has been appointed Junior Assistant Medical Officer to the Bracebridge District Asylum, Lincoln.

JOHNSON, R. G., M.B. Lond., has been appointed Certifying Surgeon under the Factory Act for the Poole District of the county of Dorset.

LEGGE, S. C., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of the Workhouse and Cottage Homes, Worcester.

LU l Physician to the In

LUN en appointed Lecturer University.

MATHEWS, T. G., M.D. Edin., has been appointed Certifying Surgeon under the Factory Act for the Kirkby Lonsdale District of the county of Westmorland.

SAMUEL, GRIFFITH K., has been appointed Resident Medical Officer to the Cardiff Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

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Surgeon. Salary £70 per annum, with board, washing, &c.

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HILST, Brompton. *torarium of £25.* tendent. Salary £500 per annum, rising to £600, with board, lodging, and attendance.

LEEDS, UNIVERSITY OF, SCHOOL OF MEDICINE.—Lecturer in Pharmacology, Therapeutics, and Materia Medica.

LINCOLN, HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary £100.

LONDON COUNTY ASYLUM, Banstead, Sutton, Surrey.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, London, E.—Teachers of Protozoology and Teachers of Helminthology. Salary £250, rising to £500 per annum, with luncheon and tea.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square.—Director of Neuro-Pathological Research. Salary £250 per annum.

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Physiology. Salary £600 with fees

ney-road, Bethnal- lary at rate of £60

OSPITAL.—Honorary

ROYAL EYE HOSPITAL OR ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, Southwark.—Refraction Assistant. Honorarium £40.

ST. BARTHOLOMEW'S HOSPITAL.—Clerk of the Hospital. Salary £600 per annum, with residence.

ST. PANCRAS, London.—Medical Superintendent of the South Infirmary and Medical Officer of the Workhouse. Salary as former £250 per annum, rising to £350, with apartments, coals, and lighting, and as latter £100 per annum.

SCARBOROUGH, BOROUGH OF.—Medical Officer of Health. Salary £350 per annum, rising to £400.

SHEFFIELD, ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £70 per annum, with board, lodging, and washing.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—

apartments, board, &c.

UNIVERSITY COLLEGE, LONDON.—Surgical Registrar at University College Hospital.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for six months. Salary at rate of £75 per annum, with board and residence.

THE Home Office, S.W., gives notice of under the Factory Act at Mary- Lanark; and at Ashbourne, in the county of Derby

Births, Marriages, and Deaths.

BIRTHS.

CAMPBELL.—On Dec. 16th, at North street, Elgin, the wife of Donald Graham Campbell, M.B., C.M. Edin., of a son.

DARDEL.—On December 12th, at Aix-les-Bains, Savoy, France, the wife of Jean Daniel, M.D., of a daughter.

EASTON.—On Dec. 15th, at Brigstock road, Thornton heath, the wife of Harold Augustus Easton, M.R.C.S., L.R.C.P., of a son.

JOHNSON.—On Dec. 12th, at Ashton House, Liscard, Cheshire, the wife of Alfred Johnson, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGE.

FOX Sutton or to ia,

DEATHS.

HILL.—On Sunday, the 11th inst., at 2, Bedford square, London, Hannah, the loving and beloved wife of J. Higham Hill, M.D.

YOUNG.—On Dec. 14th, William Musson Young, M.D., of 3, Pembridge road, Notting Hill gate, London, eldest son of the late Samuel Young, of Lisburn, co. Antrim.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SCHOOL CHILDREN AND BOOTS.

A CORRESPONDENT writes to us as follows:—

> I have been thinking lately of the grave danger children of the poorer classes run by going to school and sitting in wet boots in bad weather. Cannot something be done to remedy such a state of things—either all children forced to wear goloshes, or even institute the inconvenient ceremony of changing boots on arrival? Am I not right in saying that sitting in a warm room in damp boots is recognised to be such a dangerous proceeding that no child of the richer classes is allowed to be exposed to the risk?

Our correspondent is right in his facts but the remedy is difficult unless some class is prepared to spend a large sum of money. Goloshes are out of the question. They would never be at hand when wanted and, further, a golosh necessarily fits the boot and not the foot. Children of the class to which our correspondent refers generally wear boots which are much too big for them or even odd boots, one of which is much smaller than the other. Another alternative is that every child should have a pair of slippers to wear on arrival at the school and the change should be made every day as a matter of routine or else the slippers would never be forthcoming when wanted. But the solution of the problem is by no means easy. Our contemporary the *Evening News* has started a fund for providing the poor school children of London with boots and is collecting subscriptions for this object with great zeal. Three shillings sent to the editor at Tallis-street, London, E.C., will provide a pair of boots for some luckless child and we can think of no more practical form for Christmas charity to take.

OVERCROWDED TRAINS.

To the Editors of THE LANCET.

SIRS,—Your remarks in THE LANCET of Dec. 17th recall an experience of my own some six weeks ago. I was very indignant at the time but for obvious reasons (loss of time and expense being the chief) did not volunteer evidence before the Board of Trade. I was returning with my wife about 6 P.M. after paying some calls in town and entered a train at the Temple (on the Whitechapel and Bow Railway). We took first-class tickets and entered an empty first-class carriage. By the time we had got to Whitechapel 23 people were in the carriage and I am fairly certain that my wife and myself were the only ones who had first-class tickets. We tried to get out at Bow but could not. We managed to struggle out at Bromley. My wife's dress was torn and her feet trampled on and she was physically sick after we got out. I had a racking headache. At the barrier excess was demanded for the journey between Bow and Bromley. I refused to pay and gave my name and address after using some strong language to the ticket collector. I have not yet heard from the company.

I am, Sirs, yours faithfully,

Bow, E., Dec. 17th, 1904. EAST LONDON PRACTITIONER.

RHEUMATIC NODULES IN 1520.

IN the collection of pictures left by Signor Morelli to the Academy of Bergamo is a splendid portrait of a lady by Paolo Morando, otherwise known as Cavazzuola, a Veronese painter who lived from 1486 to 1522. There is an excellent reproduction of this in the *Connoisseur*, vol. iv., No. 15, November, 1902. The lady appears from her face to be aged about 30 years but the hands attract the attention at once as being much older. The left hand is in strong light in a central position; the abductor indicis and other interossei are strikingly wasted, the interphalangeal joints of the first two fingers are markedly enlarged, and there are typical rheumatic nodules over the head of the second phalanx of the index and over the proximal ends of both the proximal phalanges of the middle finger. This is surely the earliest record of rheumatic nodules.

PHYSICAL CULTURE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 17th, p. 1764, I find a paragraph headed "Physical Culture" impugning my action in writing an article on the question of scientific systematic exercise as a curative agent in certain ailments and particularly mentioning the Sandow treatment. In deference to the desire of the ethical committee of the British Medical Association I have now requested that the article shall not be used in the advertisement of the treatment; at the same time I feel that having inserted the above-mentioned paragraph a few words on my side of the question are necessary. I could quite understand the deprecatory criticism if I had written advocating some cure-all patent concoction or some faith-healer or bone-setter, treating one and all who applied to him without discrimination. The tone of your writer's paragraph shows that he is acquainted with the value of curative physical culture. He, however, makes a most extraordinary suggestion, that a practitioner should accompany and "superintend exercises." May I ask your readers, the majority of whom I take to be registered practitioners, a question? How many medical men would claim to be capable of "superintending the exercises of a patient for the prevention of the return of a hernia" or for that matter any curative exercises? I for one could not claim the ability. Following your writer's advice, to be logical, the learned and much revered consultants who advise their wealthy sufferers from overfeeding and insufficient exercise to go in for riding should themselves accompany and superintend their patients' trots, canters, and gallops.

Now, as was rightly stated, physical culture is at the moment almost a craze, then how doubly necessary is it that the profession should point the public to satisfactory sources of direction. The Sandow treatment to my own knowledge is most cautiously applied and with results so uniformly successful as to be surprising. I have seen cases (sent to Eugen Sandow, by the way, by leaders of our profession, some of whom have received titles in recognition of their medical achievements, who yet did not feel it incumbent to take the patients and superintend the exercises) entirely cured where a long course of drug treatment had quite failed to produce the least improvement.

Your own writer points out that Sandow is on quite a different footing from others who "run" physical culture. He and your readers are perhaps unaware of the care which is used only to apply the Sandow exercise treatment to suitable cases. Before commencing treatment in doubtful cases a doctor is consulted and frequently persons under treatment are advised by Eugen Sandow to show their exercise prescriptions to their medical adviser for his approval or suggestions.

Knowing these and many other points which I will not encroach upon your space to include I feel perfectly justified in writing the article in question. In so doing I may have exceeded what the etiquette of the profession approves but have certainly not erred against the paramount object of our profession—i.e., the doing the greatest possible amount of good for those who suffer—in making more widely known the form of treatment.

I am, Sirs, yours faithfully,

Dec. 20th, 1904. ROBERT BESWICK, M.R.C.S. Eng., L.S.A.

TUBERCULOSIS AND INFECTION.

A CORRESPONDENT who signs himself "Sanitas" writes to us on the following matter. He is acquainted with a hospital for the treatment of pulmonary consumption to which there is attached a chapel. To the services held in this chapel on Sunday afternoons the inhabitants of the neighbourhood are invited. Also at times the local choral society gives entertainments in the dining hall of the hospital and these entertainments are attended by the patients and by visitors from outside. "Sanitas" wishes to know whether, in our opinion, there is not a risk of infection from the patients to the visitors or the entertainers. We cannot, of course, definitely affirm that there is no risk but it is infinitely small and much less probably than exists in any ordinary church, concert room, or other place where people congregate. Probably the patients are fully instructed in the use of spittoons and the infective qualities of their sputum and do not cough promiscuously, as is the case with a tuberculous patient at large who has not realised the seriousness of his condition. Concerts have been held for many years past at the Brompton Hospital for Consumption at which the entertainers come from outside as does a proportion of the audience. No cases of infection have arisen from this custom, so far as we know. Nor do we think that attendance at an afternoon service at which both tuberculous and non-tuberculous worshippers assist is likely in the circumstances to give rise to infection.

THE BUILDING AND MANAGEMENT OF A SMALL LUNATIC ASYLUM.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me of a useful book detailing all the duties of a medical officer in the management of a small lunatic asylum? Also I want to know the cost of building and maintaining an asylum for not less than 60 inmates and to see plans and specifications for such a small institution.

I am, Sirs, yours faithfully,

Dec. 20th, 1904. W. D.

F.R.C.S.—The article in question is, of course, a disguised, and a very thinly disguised, advertisement. Abuse of the tactics of the paper publishing such a discreditable thing would be of no good in THE LANCET, for the public would not see our words or would regard our attitude as an interested one.

Anti-trash.—We believe that there is some foundation for our correspondent's denunciations but we also believe that he would find it possible to deal with tradesmen by whom his orders would be properly executed.

Graduate will find that the question which he has raised was discussed in THE LANCET of Nov. 19th, 1904.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 22nd, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radia in Vacuo	Maximum Temp Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Dec. 16	29 82	S.W.	0·02	67	56	41	53	54	Overcast
" 17	30 16	S.W.	...	62	57	54	52	54	Cloudy
" 18	30 29	W.	...	55	52	51	50	51	Cloudy
" 19	30 60	E.	0·03	42	42	37	39	39	Foggy
" 20	30 51	S.E.	...	43	41	35	36	36	Foggy
" 21	30 43	S.E.	...	39	39	34	35	35	Foggy
" 22	30 40	S.E.	...	36	36	34	35	35	Foggy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3 30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3 30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1 30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden square (9 30 A.M.), Guy's (1.30 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2 30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), St. Mark's (2 P.M.), Samaritan (9 30 A.M. and 2.30 P.M.), Throat, Golden square, (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. [illegible] Northern Central (2.30 P.M.), West London (2 30 P.M.), London [illegible] .M.), Throat, [illegible], Soho-square [illegible] (1 30 P.M.), St. Thomas's (2 P.M.), University College (9 15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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One Year	£1 12 6	One Year	£1 14 8
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Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

During the week marked copies of the following newspapers have been received:—*South Wales Daily Echo, Cambridge Chronicle, Eastern Daily Press, Western Mail (Cardiff), Bolton Chronicle, Westminster Gazette, Irish Times, Spectator, Essex Daily Chronicle, Observer, Literary Digest (New York), Scientific American, Morning Post, Morning Leader, Daily Chronicle, Yorkshire Daily Observer, Liverpool Courier, &c.*

Communications, Letters, &c., have been received from—

A.—Professor Clifford Allbutt, Cambridge; Anti Trash; A. E. T.; Messrs. C. Ash and Co., Lond.; Messrs. Allen and Hanburys, Lond.; Aberdeen Public Library, Librarian of.

B.—Mr. Robert Beswick, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Bristol Medico-Chirurgical Society, Hon. Secretary of; Bayer Co, Lond.; Dr. J. Biernacki, Lond.; Miss C. M. Brown, Rome; Mr. H. A. Bruce, Toronto; Mr. John R. de C. Boscawen, Truro; Dr. R. Boyall, Lond.; Mr. J. B. Bate, Forcados, West Africa; Mr. O. Berthier, Paris; Benger's Food, Manchester, Secretary of; Major G. Bent, R.A.M.C., Lichfield; Mr. J. W. Benson, Lond.; Messrs. Brown and Pank, Lond.; Dr. F. L. Brown, Pau; British Lysoform Co., Lond., Secretary of; Mr. W. Bernard, Londonderry; Mr. W. V. Ball, Lond.

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E. [illegible]

[illegible] H. W. Evans, Littleport.

F.—Farringdon General Dispensary, Lond., Secretary of.

G.—Dr. Laing Gordon, Florence; Mr. A. Greenwood, Lond.; Dr. K. D. Guzdur, Bombay; Messrs. R. W. Greeff and Co., Lond.; Messrs. Giles, Schacht, and Co., Clifton; Staff-Surgeon H. W. Gordon-Green, R.N., Southsea; Graduates; Dr. Albert Gresswell, Louth.

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T. [illegible] Ashton-[illegible] Male [illegible] Mr. Talbot-Wilson, Rome.

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Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Anderson, Pitlochry; Mr. A. B. Atherton, Fredericton; A. C. S.; Mr. E. Arnold, Lond.; A. H. W.

B.—Mr. E. Baly, Seven Kings; Burton-on-Trent Infirmary, Secretary of; Messrs. C. G. Berryman and Sons, Lond.; Dr. W. Burns, Ayr; Dr. J. Busch, Copenhagen; Messrs. Bates, Hendy, and Co., Lond.; Bristol Royal Infirmary, Secretary of; Bradford City, Treasurer of.

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J.—J. H. N.; J. G. B.; J. P. N. C.; J. H. F.; J. R. P.; J. P. S.; J. H.

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O.—O. C.

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S.—Miss A. Simpson, Crickhowell; Professor T. Schott, Frankfort; Stourfield Park Sanatorium, Bournemouth, Secretary of; Mr. H. B. Sharman, Northwood; Dr. S. Simpson, Crickhowell; *Sheffield Independent*, Manager of; Dr. A. Shiels, Dunbar; Mr. P. Swanseger, Hawke's Bay, New Zealand; Messrs. Sherratt and Hughes, Manchester; Dr. E. W. Saunders, St. Louis, U.S.A.; Messrs. Sharland and Co., Lond.; Mr. W. Somerville, Cobbinshaw.

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An Address
ON
THE TREATMENT OF PHTHISIS.

Being some Remarks, introductory to a Discussion, delivered at the Harveian Society on Dec. 8th, 1904,

By HECTOR W. G. MACKENZIE,
M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO ST. THOMAS'S HOSPITAL AND TO THE BROMPTON HOSPITAL FOR CONSUMPTION.

MR. CHAIRMAN AND GENTLEMEN,—The subject of the discussion to-night—the treatment of phthisis—is one which every physician and every general practitioner has again and again to consider and to advise upon. It may be the case that we in this society are all at one as to the methods to be employed and the results to be obtained and that after the many discussions which have been held there is nothing more to be added to our knowledge of the subject. We cannot, however, shut our eyes to the fact that, although there may be perfect unanimity here in our midst, there are many members of the profession who do not at heart believe in what is called open-air treatment and look upon it as something of the nature of a passing craze. Indeed, I am told that at the present time as regards sanatorium treatment a kind of reaction has set in which is very likely due to the fact that some enthusiastic propagandists put forward exaggerated and extravagant claims as to what these institutions could do. The ever-credulous public were led to believe that by means of sanatorium treatment consumption could be cured irrespective of the stage of the disease or the state of the patient. When they find that the patient is given air and is not soon well then they disparage the mode of treatment and pass an unjustly unfavourable judgment upon it. In this age of claptrap and catchpenny with its sensational [illegible] hear more and more of [illegible] several are prematurely [illegible] year. The cure of consumption will always attract quacks for several reasons. Patients who have never had the disease will be cured and some undoubtedly affected by the disease will improve or actually get well while being treated by almost any remedy not absolutely lethal. In the case of patients who do not do well it is easy to allege that they have come too late and that a cure might have been effected had the remedy been tried at an earlier period in the disease. A harvest may be reaped before the real uselessness of a particular mode of treatment has been demonstrated. At a large consumption hospital such as Brompton any rational form of treatment can be thoroughly tested. When a cure is first exploited as a means of making money its genuineness is *ipso facto* very much to be doubted.

I propose, then, it is needless to say, only to consider such methods of treatment as have been thoroughly and efficiently tried. With present knowledge one must place in the foremost rank as remedies pure air and sunshine, good food, suitable raiment, and proper housing, with regulated rest and exercise under medical supervision. The most marked advance in the treatment of pulmonary phthisis and one which I believe will have far-reaching effect on the health of the human race is the recognition of the vital importance of fresh air to breathe. Fresh air, essential for the maintenance of health is one of the most powerful factors in curing disease. We all know how much more attention was formerly paid to keeping up the temperature of the air indoors than to maintaining its purity. In their homes the consumptive invalids kept their windows religiously closed and shunned the open window as they would the plague. In hospitals elaborate systems of artificial ventilation have been employed with the object of supplying pure air at a comfortable temperature. These have all proved unsatisfactory hitherto.

The prevailing unwholesome dread and dislike of the open window is indirectly responsible for much of the existing pulmonary disease, so commonly attributed to our uncertain climate. Fear of fresh air has been the direst enemy of the consumptive invalid. The worst air for breathing is air which has been vitiated by the organic impurities given off in the course of respiration. The only way to obtain anything like an adequate degree of freshness in the air for an invalid indoors is to have the windows and preferably the door also widely open. Dust, smoke, and fog in the air are undesirable, and on account of them the air of towns is less wholesome than that of the country, but it is absurd and ludicrous to speak as some do of the air of London getting used up and becoming unfit to breathe towards the end of the London season. It is our object at the present day to make it possible for our consumptive patients constantly to obtain air to breathe as nearly as possible the same as the outside air. At the Brompton Hospital we now rely entirely on natural ventilation by means of open windows and open doors and the benefit to the patients is, I think, very apparent. At St. Thomas's Hospital we have for several years past used our balconies for open-air treatment, patients remaining there in their beds during the night as well as the day with excellent results. Where there is space available an outdoor shelter is a valuable auxiliary to treatment and a patient in a shelter or on a balcony properly protected from the elements will get a more abundant supply of fresh air than in even the airiest bedroom.

The advantages of the open-air treatment may be thus briefly summarised. The patient exposed continuously to fresh air gains in appetite, assimilates his food better, sleeps more soundly, and awakens more refreshed. Free exposure to air is the best antipyretic. Sweating at night, formerly so common a symptom, usually ceases. Colds are practically unknown among patients leading an open-air life. Secondary infection on account of the comparative freedom of the air from micro-organisms is much less likely to occur. Tolerance of outside air is very quickly established and no one who has tried the open-air life will willingly go back to the former conditions of stuffiness. I have never seen anyone made worse by exposure to fresh air. Even during a thick London fog patients get on better lying in bed on a balcony or in rooms with windows widely open and a good fire burning than when attempts are made to shut out the fog by keeping the windows shut.

On the beneficial influences of sunlight and sunshine on the tissues of the body it is unnecessary to enlarge. Among them are improvement in the quality and increase in the oxygenating power of the blood, stimulation of metabolism, and quickening of the activity of the nervous system. We should endeavour to secure for our patients the full advantages of all available sunlight and sunshine, especially during the winter months. Of paramount importance in treatment is the feeding of the patient. The building up of the tissues of the body and the repair of the waste are dependent on adequate nourishment. A falling-off of the appetite is an almost constant symptom of the disease and not the least benefit brought about by the open-air life is an increased desire for food. Much has been heard of the so-called overfeeding indulged in at some sanatoriums. Save in very exceptional cases anything like stuffing is quite unnecessary. At first the patient must be encouraged to eat, not because he feels hungry or inclined for food, but for the reason that feeding is essential for overcoming the disease. He should be told to take plenty of time over his food, eating it slowly and thoroughly masticating it. As a rule, both an increase in the quantity and an improvement in the quality of the food is needed. The food should be wholesome, nutritious, and well-cooked, and served in an appetising way, dishes which should be hot being hot, not lukewarm. Three good meals a day should be given and nothing during the intervals between. *There is often a distaste for fat which* is a most important element of the food for the phthisical and the patient should be encouraged to take bacon, butter, cream, &c., *in fair quantity.*

One of the *most remarkable features of pulmonary* phthisis is the capacity which the subjects of the disease have for putting on flesh. I have found it a much harder matter to fatten a thin, non-tuberculous subject than one who is *tuberculous.* Care must be taken, indeed, that the *patient does not put on flesh too rapidly* or to excess. In *regulating the amount of food due regard* must be paid to the state of nutrition. The thin, underweight patient requires a larger relative amount than the patient who is already up to his proper weight. Alcohol has been considered by some as one of our chief remedial agents and by others as not only unnecessary but harmful. The well-known case related long ago by Dr. Stokes of Dublin of the man who recovered from phthisis

(every local and general symptom occurring in the highest degree) after consuming seldom less than seven tumblers of whiskey punch per diem has been often quoted. But the man while he was not drinking punch spent his time in the open air, fishing or duck shooting, and, as Dr. Walshe says, the case only serves to show that where the disposition to repair is strong even outrageous abuse of alcohol will not counteract or even injuriously modify that disposition. The frequent incidence of phthisis in cases of chronic alcoholism, of which there is no manner of doubt, is convincing proof that alcohol is at any rate powerless to prevent the inroads and progress of tuberculosis on the pulmonary system. If this be so, how can it reasonably be maintained that alcohol can have any curative value? But I look on alcohol as a luxury in cases where an adequate amount of nourishment is being taken. It is, however, a valuable medicine in acute cases and in the later stages of the disease.

The clothing should be sensible and properly adapted to the season of the year. At all times too much wrapping is as much to be avoided as too little and is, perhaps, the more common and the more serious error. As a rule, there is no difficulty in keeping patients warm while confined to bed however cold the weather and however free the exposure to the air. It is principally a matter of sufficiency of blankets, which should not, however, be too heavy. When necessary, warmth can be provided by hot-water bottles and when the thermometer is low the hands may be protected by woollen gloves, the head by a Balaclava helmet, and the feet by woollen socks. In the case of patients who are up overcoats, wraps, and rugs should be employed only when the patient is resting. The use of mufflers and chest protectors should not be encouraged. While in the matter of housing fresh air and sunshine are our first considerations, comfort should not be disregarded. The rooms occupied by the patient should be fairly large and, if possible, have a southerly exposure so as to secure the maximum of light and sunshine. Everything in the rooms should be kept fresh and clean, damp dusters being employed for the removal of dust. Unnecessary articles of furniture, thick curtains, and hangings should not be permitted to remain. In private houses open fires are necessary for comfort and in institutions where radiators are employed for heating it is a great advantage to have open fires also.

No less important than air and food as remedial agents are rest and exercise, and the regulation of the form and proper proportion of these is one of the principal duties of the medical attendant. Our chief guide in the matter of rest is the temperature. When there is continued pyrexia absolute and complete rest is essential and this holds also where the evening temperature is 101° F. or more, although the morning temperatures are not above normal. The morning temperature as a rule should determine whether the patient is to get up or not. When it is above normal the patient will remain in bed instead of getting up. The regulation of rest by the degree of temperature brings one to the debatable point of the relative value of axillary, oral, and rectal temperatures. There is no doubt that the rectal temperature is the most trustworthy index of the temperature of the body but except in special cases I see no advantage to be gained by taking the temperature in the rectum. The condition of the pulse is another factor in deciding as to rest or exercise. Patients with a pulse-rate persistently over 100 should be kept at rest. On the whole, however, the rate of the pulse is much less important than the temperature.

The plan of making patients who are up all day rest in the recumbent position for half an hour before the two principal meals is one which has been found in practice to be very beneficial. Exercise must be proportioned to the strength and capabilities of the patient. The best form of exercise for most patients, because it can be thoroughly controlled by the physician, is walking. The length of the walk, its direction, and its rate will be adjusted to the individual case. The longer walk of the day should be taken shortly after breakfast. The length will vary from half a mile to five or six miles and the rate from one and a half to three miles an hour. If the country is hilly it should be arranged that the patient goes uphill and returns downhill. All walks uphill should be taken slowly and deliberately, and the patient should always rest when he feels he is getting out of breath. In the afternoon a shorter walk may be taken. The effect of exercise on the temperature of the healthy body is temporarily to raise it one or two degrees. When the exercise is excessive the temperature will be found to have risen more than two degrees. The taking of the temperature after exercise is a valuable check on any excess. Over-exertion is very harmful and all forms of violent exercise must be emphatically vetoed. Cycling, skating, swimming, running, riding, fencing, dancing, tobogganing, cannot safely be permitted to anyone with signs of active disease. In cases where the disease is arrested such exercises as riding, golf, and cycling in moderation are beneficial.

Whether a patient should be treated at home or elsewhere depends on the nature of the case, on the home conditions, and on ways and means. The question of ways and means is often of much importance. It may sometimes be considerably less expensive for the patient to go to a sanatorium than to remain at home. It may be impossible at home to get proper attention. The home conditions may be altogether unsatisfactory. But where the home conditions are good where the patient can have a clean, light, airy room and good food and attendance, home treatment has considerable advantages in all cases where it is necessary to keep the patient continuously in bed. From my experience of cases treated on our balconies at St. Thomas's Hospital or in our airy wards at Brompton Hospital I should say emphatically that the results compare favourably with those of any country sanatorium in the kingdom. Therefore I am of opinion that if the home conditions are good it is often best to keep the patient at home during the continuance of pyrexia. Often, however, home conditions are entirely harmful and then no hesitation should be felt in recommending the removal of the patient to a suitable institution.

The advantages which sanatorium treatment presents are many. The patient is under constant medical supervision. He is removed from all disturbing influences; he is encouraged to take adequate amounts of food; he is made to take sufficient rest; he is prevented from over-exertion; he is induced to take the proper amount of exercise; he is taught how to live; he breathes pure air continuously throughout the day and night; he lives with one object, that of getting well; and he has a constant object lesson in watching the good effects of the treatment on others. No one who is well enough to be up and about can fail to derive the greatest benefit from residence at a sanatorium. He is able to take his walks among woodlands and country lanes and if he is a lover of nature he cannot but find much to interest him during his rambles. It must be clearly understood that satisfactory results are only obtained where plenty of time is given to the cure and that treatment must be carried out faithfully for at least six months and often for a much longer time in order to obtain satisfactory results. It must be confessed that the proportion of absolute cures is not very large, if by absolute cure is meant the disappearance of symptoms and of abnormal physical signs, together with absence of bacilli from the sputum. We must be content in most cases with a relative cure where symptoms are in abeyance and signs of activity of disease disappear.

I am strongly of opinion that for a large class of patients sanatorium treatment affords the best chance of cure which we can offer at present. I must, however, protest against the lack of judgment sometimes shown in the selection of cases for this mode of treatment. It is no use sending advanced and actively progressing cases. Such cases are apt to bring discredit on the treatment and their presence in a sanatorium has a bad influence on the other patients. In deciding as to sanatorium treatment we should take into account the temperament and social position of the patient as well as the stage of the disease. To every patient whom one recommends to go to a sanatorium it may be said: "I cannot possibly promise that your treatment there will cure you or even benefit you but I can honestly tell you that in this way you will be giving yourself the best chance of battling with the disease successfully."

The effects of climate *per se* are difficult to distinguish from the effects of the conditions under which the patient has to live. At most health resorts, both at home and abroad, hotel life is utterly unsuitable for consumptive invalids. We all know the intolerably stuffy atmosphere of the public rooms and passages at some of the best hotels. Where a patient can afford to have his own suite of rooms and have his meals served in his own apartments it is a different matter. In most cases a sanatorium, or villa, or flat, or private apartments should, as a rule, be selected in preference to a hotel. The good results obtained by sanatoriums in many different parts of England go far to show that our home climate is not unfavourable to lung patients and that.

even in winter residence in England is quite compatible with an open-air life. But who that can do so would not exchange our dull English winter and spring for the bright sunshine of the lofty Swiss valleys or the French and Italian Riviera? The pure, dry, calm air of Davos or St. Moritz, with many bright and sunny days throughout the winter, I consider to be of the highest value. St. Moritz has become of late much frequented by smart society people in search of pleasure. Its winter climatic advantages are, however, quite as great as those of Davos. For chronic quiescent cases the climate is excellent but there are so many temptations even at Davos to over-exertion and various imprudences that only those who can be trusted to take care of themselves should be allowed to go there except to a sanatorium. Sea voyages I find are still often recommended to consumptive patients by general practitioners as well as by physicians. I have seen some good results but I have seen some most disastrous ones. I cannot too strongly condemn the indiscriminate advice to patients to go for a sea voyage. The conditions on board ship are very far from those we desire for our patients. The deck is all right but the cabin is all wrong and in the event of the patient being taken ill on the way and confined to his berth the conditions are most unfavourable. No patient in whom there is any sign of active disease should be permitted to take a sea voyage for health. Even in quiescent cases much harm is done. I know of two quiescent cases where the passage through the Red Sea was attended by renewed activity and the patients were put ashore at Colombo and sent home to die.

Our mode of treatment often requires modification in individual cases. The condition of the digestive organs sometimes presents a formidable difficulty but it is remarkable how comparatively seldom one meets with any really serious dyspeptic trouble among phthisical patients. Indifference or actual repugnance to food is the most common trouble and, as a rule, the worse the nutrition and the greater the need of food the less inclination there is for it. This must be overcome by persuasion and suggestion, assisted by a bitter alkaline or acid tonic. In some cases coughing is induced by the presence of food in the stomach and the cough may continue until vomiting occurs and the contents of the stomach are expelled. In such cases the patient must be enjoined to keep perfectly quiet after food and to refrain from talking. The inclination to coughing should be resisted as far as possible. Various remedies have been recommended for this condition. One of the best is a mixture containing five grains of alum and five minims of liquor potassæ in each dose take[illegible]

Pyrexia is one of the most [illegible] how a patient is to be treated. [illegible] disappointment have often been expressed to me by patients who have been kept in bed after their arrival at a sanatorium. Rest is a *sine quâ non* when there is pyrexia. But, of course, it makes all the difference whether the rest is obtained in a close, stuffy room or in a pure atmosphere. Hæmoptysis always is an indication for modification of the treatment. The remedies in greatest repute at present are rest and low diet. All cases of profuse hæmoptysis should be kept absolutely at rest, but I do not consider it is necessary or advisable to keep a patient at rest in bed simply because the sputum is slightly coloured with blood. At one time I followed the general rule of keeping all patients with hæmoptysis on low diet, a diet consisting of a limited quantity of fluid in the form of milk and small rations of bread and pounded meat. But except in the case of large and repeated hæmoptysis I do not think the diet is a matter of so much consequence as has generally been taught. Recently I have given up using the special diet for hæmoptysis at the Brompton Hospital and my impression is that patients pass through an attack losing [illegible] than has [illegible] the stage [illegible] essential when there is pyrexia we regard exercise to be just as important in the afebrile period. I have already touched on the modifications of treatment called for by such complications as hæmoptysis and dyspepsia. When there is laryngeal [illegible] I have [illegible] air treatment. For the most difficult cases to treat are those in which there is advanced and active disease. As a rule they must be treated at home. Everything should be done to give them the best possible hygienic advantage to attend to their comfort and to alleviate their sufferings. We must also adapt our treatment to the age, sex, and social position of the patient. Elderly patients, as a rule, do not tolerate cold so well as younger subjects and therefore one hesitates to send them to high altitudes or to recommend the rigorous treatment of a sanatorium. Fresh air to them is just as important but it needs to be combined with warmth and sunshine. Women I have observed do not respond to sanatorium treatment nearly so well as men. This, I believe, is due to their having, as a rule, less resisting power to the disease and to their being less capable of taking adequate quantities of nourishment. They feel also much more than men the separation from home. It is not only at country sanatoriums that women do less well than men. We find at Brompton Hospital that a smaller percentage of the women are much improved and a larger percentage are not benefited than in the case of the men. Special arrangements may be made for patients to whom money is no object or whose social position and mode of life would make such treatment as is carried out at a sanatorium undesirable if not intolerable.

I propose to say very little about drugs, for time does not permit more than a passing reference to their utility. Medicinal treatment in many cases is of very secondary importance to the hygienic influences I have already considered. It is in the cases that do not do well that we employ drugs most extensively. The hospital patient who leaves much improved will usually be found to have had but little written on his medicine card. The patient who steadily gets worse does so in spite of the fact that all the resources of medicine are employed on his behalf. The most generally useful medicine is one which will help the patient to eat and aid his diges[illegible] of patients than [illegible] of the Brompton [illegible] food. In some cases an acid, in others an alkali, with gentian, calumba, quinine, or strychnine, may be given. Cod-liver oil is undoubtedly of much value but it is rather a food than a medicine. It has a very high equivalent in calories, a dessertspoonful of the oil being the equivalent of an egg. With regard to those drugs for which something of a specific action has been claimed we may say that they all fail when employed in cases of extensive and spreading disease. Creasote, guaiacol, and their congeners are now much less used than they were a few years ago. Any effect which they have is due to their action on the stomach in stimulating the appetite and thus aiding in the improvement of nutrition. The action of antiseptics administered by the mouth, it is now recognised, is limited to the effect on the digestive tract.

It is in relieving symptoms that the usefulness of drugs is most apparent. Cough is the most constant and one of the most troublesome of all the symptoms. Much good may be done by impressing on the patient the importance of restraining cough when it is unattended by expectoration and when it occurs after meals. The cough which occurs in the morning after waking from sleep is one which it is undesirable to check, as it usually results in clearing away the secretion which has accumulated during the night. As a rule ordinary cough linctuses and lozenges should be dispensed with. Tuberculin treatment still finds some adherents and I am in favour of employing it in apyrexial cases which under the best hygienic treatment have improved up to a certain point and then have failed to make further progress. Whether Professor A. E. Wright's tuberculin is or is not an advance on any previous preparation I am not in a position to say. It is only when a treatment is tried on a large scale that any definite pronouncement can be made upon it. Serum treatment has so far proved very disappointing. Professor Marmorek's serum which we lately tried at the Brompton Hospital has proved no more successful in active and progressive cases than others which had been previously put to the test and found wanting.

Whatever plan of treatment is carried out, but especially when hygienic or open-air or sanatorium methods are employed, it is of the utmost importance to secure the intelligent cooperation of the patient. This cannot be done unless we frankly inform him what is the nature of his complaint. In former times it was often the practice to conceal this carefully from him. He was told that his lungs were weak or that he had catarrh or a bronchial attack. To

overcome the disease it is necessary to give up a good deal of what are ordinarily reckoned the pleasures of life and to implicitly follow out rules of conduct which call for self-denial and self-control. No one can be expected to do this unless he is satisfied that it is necessary and unless he is possessed of at least ordinary intelligence. One often hears the expression, "the curable stage of phthisis," and I wish to say that I agree with Walshe when he stated that there was no stage of the disease which is surely curable. It is misleading to preach any such doctrine as that consumption is certainly curable if the case is taken in hand early enough. The earlier a case is taken in hand the better but we can never guarantee that a cure will be effected. The most hopeful cases for any form of treatment are those where the disease is chronic, quiescent, and of small extent. Natural tendency to fibrosis and inherent resistance to the disease are the most important elements which make for recovery. Where the disposition to arrest and repair is strong even the most injudicious treatment may appear of signal efficacy.

In conclusion, let me say that I feel that I have given a very inadequate sketch of the means available for the treatment of consumption. The subject is a very large one and it has been possible only to touch on the most important points. For the hygienic treatment I do not claim that it is the best attainable, only that it is the best so far attained. There is no finality in medicine and the treatment of to-day may be, nay, will be, vastly improved on in the coming to-morrow. However that may be no one, I am sure, will dream of attempting to cure tuberculosis on the old plan of coddling and cosseting patients in the stuffy and vitiated atmosphere which even now is associated in the minds of many as a necessary characteristic of the sickroom.

THE TREATMENT OF STREPTOCOCCIC PUERPERAL FEVER BY ANTITOXIC SERUM.

ALEXANDER G. R. FOULERTON, F.R.C.S. ENG., D.P.H. CANTAB.,

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THE uncertainty of the action of antistreptococcic serum in the treatment of streptococcic infections is well recognised in practice and because of it the method of serum treatment has been discredited to a considerable extent in this class of bacterial infections. But the reasons for this uncertainty are easily explained and the complete failure of serum treatment in a large proportion of the cases of streptococcic infection in which it has been used has been inevitable under the existing conditions.

It will be remembered that the first antistreptococcic serum—that of Marmorek—was prepared from a single strain of streptococcus, and it was believed by Marmorek, Behring, and others that the serum thus prepared was specifically antitoxic in all cases of streptococcic infection. And this belief in the unity of streptococcus pyogenes and consequently in the unity of streptococcic toxins and the correlated antitoxins was so firmly held at first that a brand of antistreptococcic serum which was at one time extensively used in this country was prepared from a single strain of streptococcus which was not even derived from a human source but had been isolated from one of the lower animals.

On the other hand, many efforts have been made to differentiate separate species of streptococci and thus streptococcus erysipelatis, streptococcus longus, streptococcus brevis, streptococcus conglomeratus, the enterococcus of Thiercelin, and others, have been described; and there can be but little doubt but that between various streptococci as we isolate them from cases of disease there are often differences—as to their several morphological and cultural characteristics, as to their pathogenic action, and as to their behaviour in relation with different antistreptococcic serums when tested *in vitro* or by animal experiment—so distinct as to entitle us to assume that we are dealing with definite species of *streptococci rather than* with mere varieties of a single species, streptococcus pyogenes. And, in short, I suppose that at present it would be acknowledged by most bacteriologists who come into actual contact with clinical work that the term streptococcus pyogenes, as we use it, does not denominate a single species but rather is to be understood as a sort of general name which includes several species of cocci, with related varieties, which present a common similarity in their tendency to assume a streptococcal type of grouping. It is, therefore, not a matter for surprise that, applied under such conditions of uncertainty, serum treatment—in itself the most . . method in the whole range of therapeuti . . as a necessity equal accuracy in diagnosis—should have frequently proved a failure in cases of streptococcic infection.

The unequal results which had been obtained in clinical practice by the indiscriminate use in every case of streptococcic infection of an antistreptococcic serum prepared from a single strain were soon explained by experiment in the laboratory, and at the same time the way in which the difficulty might be met was pointed out. Amongst much experimental work which has been carried out in the investigation of the question as to the identical specificity or otherwise of different strains of streptococci that of Van de Velde has been perhaps the most suggestive. Van de Velde made a careful study of 21 strains of streptococci derived from the following cases of disease: four from cases of puerperal infection, four from cases of post-operative peritonitis, four from cases of sore-throat, three from abscesses, three from cases of erysipelas, and single strains from cases of arthritis, bronchitis, and cystitis. After a full consideration of the methods of growth and other characteristics of these 21 strains Van de Velde found himself in accordance with the opinions of those who believed in the identical specificity of all varieties of streptococci. But whilst Van de Velde himself came to this conclusion I think that the results of his carefully detailed work are at least open to the opposite interpretation, and for my own part I would claim that his experiments proved such differences between various strains which he worked with as to support what has been already said as to specific differences between some of the strains of streptococci which are found as causers of disease. For the present purpose, however, and in view of the results of Van de Velde's experiments as to the influence of different antistreptococcic serums on different strains this question as to whether the streptococci which he isolated represented one or more species is of merely academic interest and turns mainly upon the precise meaning to be attached to the word "species." Van de Velde carried out a series of experiments in order to test the action of the serum of a horse which has been immunised against one particular strain of streptococcus when used against an experimental infection by another strain. He found that serum of a horse immunised against streptococcus "A," isolated from an abscess, protected to only a slight extent against streptococcus "P," isolated from a case of puerperal infection; also it was found that the serum from a horse immunised against streptococcus "P" did not afford any protection against streptococcus "A," each serum being, of course, actively protective against the particular strain from which it was prepared. A third horse was then immunised against both strains and the serum thus prepared was found to be actively protective against both streptococcus "A" and "P." A fourth antistreptococcic serum (Marmorek's) did not afford any protection against streptococcus "A," and other similar results were obtained with various strains of streptococci. The logical deductions from these results were obvious and Professor Denys of Louvain, at whose suggestion Van de Velde had undertaken his investigation, proceeded to prepare a polyvalent antistreptococcic serum for clinical use, the horse being immunised against strains of streptococci obtained from the most widely diverse forms of disease. And at the present time there are several brands of polyvalent antistreptococcic serum available for general use.

During the years 1896-97-98, when antistreptococcic serum was coming into common use, I gave special attention to the results obtained in the treatment of puerperal fevers, collecting a long series of cases in which one or other brand of antistreptococcic serum had been used. And leaving on one side the cases in which no bacteriological diagnosis had been made, it was obvious that the uncertainty of result which characterised the serum treatment of streptococcic infections generally prevailed also to a very marked extent in the special clinical group of cases of streptococcic puerperal fever. And whilst it was in only a minority of these cases of puerperal infection that serum treatment appeared to have

been of real use, its beneficial action was so distinctly marked in this minority that there could be no doubt as to the specific nature of the remedy which had been employed in them. So decided and abrupt was the improvement which sometimes followed immediately on its use that it was impossible to regard the injection of the serum and the consequent lowering of temperature and general relief from symptoms otherwise than in the relationship of cause and effect And in view of these positive results in a minority of the cases it seemed probable in the highest degree that the frequent failure in other cases which, of equal or less severity, were clinically similar must be due to the fact that the particular serum used had no specific antitoxic action with regard to the special variety of streptococcus causing the infection, or, in other words, that the serum had been prepared from a streptococcus of different pathogenic nature

Because of various circumstances further work in connexion with this question was postponed until the early part of 1901, when, with the valuable coöperation of Dr Victor Bonney, a systematic investigation into the bacteriology of puerperal infections was commenced And during the last three and a half years we have examined the contents of the uterus in a *considerable series of cases of fever* following on either miscarriage or labour at full term Our results will be published in detail on an early date and I will now refer to them only so far as they effect the matter immediately under consideration, and that very briefly

In the first place, it may be said that our results have confirmed fully what has been repeatedly demonstrated since Pasteur and Doléris first called attention to the predominating influence of streptococci in the causation of puerperal fevers The proportion of cases of puerperal fever which are the result of a streptococcic infection has been variously stated by different authorities, thus Kronig found streptococci present in 41 9 per cent of his series of 179 cases, whilst Whitridge Williams found them in only 29 3 per cent of a series of 150 In our own work we have endeavoured to comply as far as we could with the conditions necessary for insuring [illegible] found in a series of cases [illegible] any gross fallacy arising [illegible] the relative importance of *streptococci in puerperal infections* is even more marked than a consideration of previous bacteriological researches on the subject would have led us to anticipate In brief our own investigations up to the present time have given the following results We have found streptococci of one sort or another in the uterus in 46 3 per cent of a series of 54 cases which we have examined, and in these cases the organisms have been found under conditions which indicated that they were the primary cause of the fever If, however we exclude the less severe cases of fever occurring after childbirth and consider only those which either ended in death or were clinically of a distinctly serious nature we have found streptococci present as the presumable cause of disease in 62 5 per cent These statements are given in general terms and will be amplified in a future joint paper with Dr Bonney Ou [illegible] commenced with the view of [illegible] of streptococcic puerperal f [illegible] ement were suggested by our results we have studied in detail various strains of streptococci which have been isolated from our cases Up to the present time we have dealt with 25 strains of streptococci isolated from the same number of cases of puerperal fever and we have satisfied ourselves that amongst these 25 strains there is more than one distinct species as we understand that term

After nearly two years' work at the subject we decided that we had sufficient reason for testing the use of a serum to be prepared from a horse which had been immunised against a variety of the strains which we had isolated certain cultures were handed over to the serum laboratories of a well known firm, and from these an antistreptococcic serum has been prepared in the ordinary way, the horse having been vaccinated with five of the strains As yet this serum has been used in only a few cases but amongst them there have been two [illegible] recovery after extremely severe forms of streptococcic infection—in one case the consequence of a miscarriage, in the other following on labour at full term And whilst the special value of a serum thus prepared for use in puerperal cases as against the ordinary polyvalent antistreptococcic serum hitherto used has yet to be proved, I think that a full consideration of all the circumstances justifies the opinion that if the serum treatment of streptococcic puerperal fever is to be placed on a satisfactory basis it must be by means of some such method as that which we have endeavoured to carry out

Apart from the failure of serum treatment in puerperal fever arising from uncertainty as to the particular strain of streptococcus which is present, the question of the dosage of the serum which is employed appears to be of considerable importance In the absence of any approximately accurate method of standardising the potency of different antistreptococcic serums it is obvious that any system of dosage must be entirely empirical, but a review of the cases of streptococcic puerperal fever in which a serum has been used with apparent success brings out very strongly the fact that when recovery occurs in severe cases it is after large doses of serum, frequently repeated

In clinical practice the act [illegible] contrasts strongly with that of [illegible] respect In diphtheria the [illegible] dose of antitoxic units is usually followed by immediate improvement, the improvement is sustained and generally there is no need to repeat the dose In cases of streptococcic puerperal fever, on the other hand, the rule has been that when improvement has followed on the first injection it has been necessary to repeat the dose of serum time after time Thus whilst in some cases the improvement following the first injection has been as marked as anything that is seen in the antitoxic treatment of diphtheria—sometimes, perhaps, the effect has been even more striking in the case of a patient apparently moribund with a severe streptococcic infection—it has been found again and again that within 24 hours serious sym [illegible] the repetition of [illegible] entirely from the [illegible] the action of an [illegible] and that, at any r [illegible] ing in a severe puerperal infection [illegible] selves are not affected by its use In such a case there will frequently be a condition of streptococcic pelvic cellulitis and the infecting bacteria unaffected by the serum given continue to elaborate their specific toxins And in order to neutralise the toxins which are thus being continuously thrown into the patient's circulation repeated doses of the serum must be given until the infection comes to a natural termination

With any of the antistreptococcic serums at present in use it is advisable to commence treatment with an injection of at least 20 cubic centimetres and one must be prepared to repeat this dose if necessary at least every 24 hours Another point which appears [illegible] general results of serum treat [illegible] the serum is going to do any good [illegible] at once apparent And consequently it is useless to persist in the use of a particular antistreptococcic serum unless its beneficial action is almost immediately apparent If in a case of streptococcic puerperal infection no improvement follows two doses of 20 cubic centimetres administered within 12 hours it is useless to persist in administering it, another brand of serum should at once be tried

In conclusion I may just refer to the prejudice against the use of large injections of antistreptococcic serum which has arisen in the minds of some practitioners from the idea that the use of this class of serum is especially liable to be followed by certain toxic symptoms, the appearance of cutaneous eruptions with slight rise of temperature, and transient arthropathies Such unfavourable symptoms are [illegible] follow on the injec [illegible] n the injection of an [illegible] n of a normal horse [illegible] serum, in fact the most severe constitutional disturbance which I have ever seen following the use of a serum was in a patient who had received an injection of what was for practical purposes a normal horse serum The reason why these symptoms have been more especially noticed in the serum treatment of streptococcic infections is doubtless because in such cases it is as I have said, frequently necessary to give large and repeated doses, and possibly also the patients who require treatment with anti streptococcic serum are in such a condition that they are specially liable to react to horse serum In any case it is probable that these toxic symptoms following on the use of a serum are not of any particular consequence and I am not aware of a single case in which any definite harm to the patient

has resulted. But whatever the dangers are they must be risked when dealing with a severe streptococcic infection and it cannot be too strongly insisted on that with the serums which are at present available a large dose is necessary for any success; the dose of five cubic centimetres of antistreptococcic serum which is sometimes advised is probably quite useless and failure which is the consequence of inadequate dosage is one of the reasons why the use of antistreptococcic serum in puerperal cases has fallen into partial disrepute.

The Middlesex Hospital, W.

A CASE OF STREPTOCOCCIC PUERPERAL INFECTION TREATED WITH A SPECIAL PUERPERAL ANTISTREPTOCOCCIC SERUM; RECOVERY.

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THE case to which the following notes refer was one of an extremely severe type of streptococcic infection in which there seemed to be no doubt that ultimately recovery was due to the action of an antistreptococcic serum.

The patient, who was 29 years of age, was admitted into the Chelsea Hospital for Women on Nov. 12th, 1904. Her previous history showed that on Oct. 15th she was delivered of her third child. The puerperium and labour were normal but the latter was a little prolonged. She was attended by a midwife, and on Oct. 18th the temperature rose to 102·4° F. and the pulse-rate was 120. A medical practitioner was then called in and the uterus was explored but nothing was found retained. An intra-uterine douche of perchloride of mercury (1 to 4000) was given. The temperature fell and everything appeared to be going on well until Nov. 1st, when the left leg became painful and began to swell. The temperature gradually rose again and on the 5th the right also was swollen. When admitted into hospital on the 9th the patient was extremely ill; she was very anæmic, temperature was 102°, and the pulse-rate was 120. There was some rigidity of the lower part of the abdominal wall but no distension or tenderness on pressure. By vaginal examination it was found that the uterus was slightly enlarged and tender; the os uteri had contracted; there was no discharge or offensive odour. There was distinct fulness in both lateral fornices. Both legs were considerably swollen and presented typically the appearance of white leg. On the 17th the temperature fell to 98·4°, the pulse-rate was 120, but the general condition of the patient was not improved in any way. Towards the evening the temperature began to rise again and a condition of mental apathy became apparent. She gradually became worse and on the 20th the temperature was 102·8° and the pulse-rate was 160. On the 22nd the patient, having been delirious for two days, passed into an unconscious condition. There were sordes on the lips and urine and fæces escaped incontinently; the temperature was 102° and the pulse was uncountable. She was being fed through a nasal tube and cardiac stimulants were given freely, without, however, any improvement in the state of the pulse.

Dr. W. F. V. Bonney saw the patient on this date and advised the injection of the puerperal antistreptococcic serum suggested by Mr. A. G. R. Foulerton and doses of five cubic centimetres each were injected at noon, at 6 P.M., and at midnight. On the morning of the 23rd the temperature had fallen to 101° and the pulse-rate was 148. At noon a dose of 20 cubic centimetres of the serum was injected and at 2 A.M. on the 24th the temperature had fallen to 98·2° and the pulse-rate was 108. There was a most marked improvement in her general condition and she was able to take a little nourishment by the mouth. The temperature remained at the normal and progress towards recovery was uninterrupted except by the appearance of an erythematous rash on Dec. 2nd accompanied by some febrile disturbance. The rash appeared first on the abdomen, round the place at which the serum had been injected, and spread to the legs and arms; it persisted for three days, during which the temperature ranged between 98·2° and 99·8°.

In this case the effect of the serum injections was well marked. On Nov. 22nd, when the serum was first given, the patient was in a most serious condition and a fatal result was anticipated. Owing to a misapprehension rather small doses of the serum were given during the first 12 hours but distinct improvement was obvious, the temperature fell somewhat, and the pulse, hitherto uncountable, could be counted. The result of the larger dose, given 24 hours after the first injection, was very distinct, and within a few hours the patient was practically out of danger.

The case appeared to be one of pure streptococcic infection. At the commencement of the serum treatment a sterilised "swab" was passed with the usual precautions directly into the cavity of the uterus and the result of the bacteriological examination in the laboratories of the Middlesex Hospital was to prove the presence of a streptococcus in pure culture.

My thanks are due to Dr. W. H. Fenton for his kind permission to publish the details of this case, which was under his care at the hospital, and to Mr. Foulerton for placing at my disposal the special puerperal antistreptococcic serum which was used.

Chelsea Hospital for Women, S.W.

ON THE ADMINISTRATION OF ANTI-STREPTOCOCCIC SERUM.[1]

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SERUM-THERAPY in many of its phases has hardly yet emerged from the experimental stage. Although recently the number of antibodies has increased and careful experiments on animals have proved their efficiency, yet there is great need for more complete observations on the effect of these serums on infective processes in the human body. We have not yet left the stage at which isolated reports of cases treated with antitoxins help towards the definition of our knowledge and each carefully observed case which is complete from the bacteriologist's point of view is of value. The following case is a record of my personal experience as a culture medium for the streptococcus. I believe that there are some points of definite value in the course and treatment of the case and have therefore ventured to give it publicity.

The source of infection was the body of a child one month old, on which a necropsy was performed on May 4th, and in which, besides suppurative epiphysitis and necrosis of the right humerus, there were infected areas in the subcutaneous cellular tissues over the left pectoral muscle, the left wrist-joint, around the left tendo Achillis, and the right popliteal space. These areas had either been incised and were dry and non-granulating or they formed reddened patches on the surface which showed an accumulation of bloody serum in the cellular tissue on incision. The child had been infected by way of the umbilical vein, for there was an encapsulated accumulation of yellow pus of about the size of a hazel nut at the transverse fissure of the liver.

No suspicion was entertained at the time of the necropsy that the hands had been cut or scratched during its performance. The same night, however, a tiny puncture was discovered at the distal joint fold of the left index finger and a carbolic dressing was applied. A small swollen area was present around this puncture next morning, but there were no signs of its spreading or of its absorption into the general circulation. At mid-day, rather less than 24 hours after the infection, there was a feeling of malaise which increased and three hours later a well-marked rigor occurred; the temperature at 4.30 P.M. was 97° F.; the axilla was now painful and on examination the lymphatics could be traced in red streaks the whole length of the arm. The axillary glands were tender but only slightly enlarged. Half an hour later the temperature had risen to 101° and at 6.30 P.M. Mr. F. F.

[1] Nearly three years have elapsed since this record was written but during this time the manuscript has been unavoidably laid aside. Further cases have been recorded in the interval but I believe that there are still points of sufficient interest in this one to merit publication and I have left my original comments on the case unaltered.

Burghard made an incision in the swollen tissues at the point of infection. At this time the finger was swollen and tense as far as the second joint. No pus was obtained from the incision, but a specimen of the blood was sent to Mr. T. J. Bokenham for examination. At the same time 25 cubic centimetres of antistreptococcic serum (Burroughs, Wellcome, and Co.) were injected beneath the skin of the abdomen; at 7.30 P.M. the temperature was 102·4°. At 9.30 P.M. it had fallen to 100·2° but later (11.45 P.M.) it was again 101°. On May 6th another ten cubic [illegible] ijected in the morning and the [illegible] the morning to 98·8° in the [illegible] elling of the hand continued to spread, the finger was tense and glazed, and this appearance extended over the knuckles to the middle of the hand. The proximal interphalangeal joint was tensely distended with fluid. There were a patch of redness and some swelling over the back of the forearm. Ten cubic centimetres of serum were again injected in the evening. The bacteriological report stated that the infection was "a pure culture of streptococcus of very virulent nature." On the 7th the temperature remained below 99° and no further injection of serum was given. The condition of the hand and arm appeared to be stationary, but on the next day the swelling of the hand and the lymphangitis began to subside and the improvement thereafter was continuous.

Rashes.—36 hours after the first injection an erythematous rash appeared around the injection puncture and spread over the right half of the abdomen. 12 hours later a similar rash appeared round the second puncture and a similar phenomenon appeared around each succeeding puncture after a definite interval of time. The right groin and axillary glands became painful and somewhat enlarged soon after the appearance of the erythema and remained in this condition for four or five days. On May 14th there was still well-marked erythema present and a very irritating urticaria-like rash appeared over both sides of the abdomen and lasted for some hours. The right groin and axillary glands were still tender and slightly enlarged. On the 15th, after being in the country for six days on tonic treatment, acute effusion suddenly occurred in the sheaths of the tendo Achillis on both sides. This was accompanied by a feeling of malaise and slight chilliness but there was no distinct rigor. The tendon sheaths were tensely distended and extremely tender and the skin over them showed a bright red blush and the depressions behind the malleoli were puffy and filled up. The temperature stood at 99·5° at 8 P.M. On both legs a bright pink rash, formed of numerous small slightly raised spots with a slight amount of irritation, appeared just above the swollen tendon sheaths and extended over the lower third of the leg posteriorly. Ten cubic centimetres of serum were injected under the skin of the abdomen and the ankles were swathed in moist carbolic dressing.

On May 16th there were tenderness and swelling over the posterior aspect of the external condyle of the right humerus and this spread up into the lower third of the arm. A tender area of redness and swelling appeared over the head of the right ulna. On the 17th another area of swelling appeared on the front of the left forearm just above the wrist. There were some tenderness and puffiness over the condyles of the left humerus posteriorly. A bright pink rash similar to that on the legs appeared over each spot of tenderness. The temperature remained at 99·5°. Sodium salicylate, ten grains thrice daily, was commenced. On the 18th swelling took place over the tendon sheaths of the right popliteal space and this spread up into the muscles of the [illegible] of the thigh. A marked area of [illegible] the tendon sheaths at the back [illegible] and spread rapidly and there was [illegible] the left popliteal space. Erythema appeared round the puncture on the skin of the abdomen after an interval of about 36 hours. The swelling of the tendo Achillis sheaths gradually diminished and in four days was almost go[illegible] 48 hours, [illegible] rapidly. [illegible] not above 99·5°.

At first sight this case might seem unimportant when compared with many of those reported in the medical journals of the past year or more. The temperature here was at no time alarming and the general condition was well sustained. There are, however, several features which may be considered important if only from the fact that they define more clearly some points on which other cases have raised merely a suspicion. The infection was undoubtedly of a virulent character. The source of infection was one from which a very active growth of micro-organisms was to be expected; the onset of severe general symptoms within 24 [illegible] a [illegible] together with the bacteriologist's report, all combined to accentuate the gravity of the case. The effect of the serum has, therefore, to be considered in regard to a pure streptococcal infection which had become fully established. This effect was rapid and striking. The temperature continued to rise for an hour or more after the injection. It then fell two degrees. This drop was followed by another rise two hours later, but on the next morning (eight hours later) the temperature had fallen to 100° and by the same evening it was practically normal. It might be urged that this fall was the result of the incision of the infected area, but on this point no doubt should remain, for the condition of the hand and arm was infinitely more serious *after* the temperature had fallen than it was during the height of the fever and the swelling continued to spread for nearly 48 hours after the temperature became normal. Such a definite and beneficial result is not always obtained in cases of septicæmia and there are many cases—not all of which reach the medical journals—in which the injection of this serum has led to little or no effect. There is, however, good reason for such disappointments.

It has been proved by experiments on animals that these antibodies are selective in their action, that to combat the toxin of each micro-organism only the serum provided by animals immunised against that organism is effective. It is not, however, always easy to obtain definite evidence in regard to the causative organism in the infective processes of the human body and without this serum-therapy must be largely empirical. The cases in which this special antitoxin has been most frequently used (if we may judge by the reports which have appeared in the medical journals) have been those of puerperal fever. In such cases it is difficult, often impossible, to obtain a precise and independent bacteriological report upon the nature of the infection. The value of antistreptococcic serum in cases of puerperal septicæmia was the subject of debate at a meeting of the British Medical Association in 1899.[1] At that time the majority of clinicians appeared to regard the method unfavourably. Dr. Herbert Spencer in opening the discussion expressed his opinion that the treatment was unscientific owing to the majority of cases of puerperal fever being due to organisms other than streptococci, that it had not reduced the mortality and that it was not free from danger. In the same year a committee of the American Gynæcological Society[2] reported that Marmorek's claim that his serum would cure puerperal infection was not sustained, and that thus far the only definite result of Marmorek's work was the development of a method by which the virulence of streptococci might be increased to an almost inconceivable extent. These opinions were expressed in the early days of the serum. More recent work by Lea,[3] Pestalozza,[4] and others has shown that the streptococcus is the organism most frequently found in puerperal septicæmia and many very striking cases of cure by injection of this antitoxin may be found in medical journals of recent date. One may therefore expect that when next the subject is fully discussed these views will be very materially altered or entirely refuted. What is really wanted to establish this serum on a firm basis and to gain for it the confidence alike of the practitioner and the surgeon is a series of fully reported cases of pure streptococcal infection from any source, puerperal or otherwise, bacteriologically complete and treated with antistreptococcic serum. The present case appears to me to fulfil these requirements and has therefore a definite value.

Another point in the selective affinity of streptococcus antitoxin, and one which may explain the unsatisfactory action of the serum in some proved cases of streptococcal infection, is the fact that each different variety of streptococcus produces an antitoxin which is innocuous to other members of the group. Thus, to take an instance, the streptococcus antitoxin of erysipelas may not affect the toxin produced in streptococcal puerperal fever. To obviate this drawback in the therapeutic action of the serum

[1] Brit. Med. Jour., vol. ii., 1899, p. 935.
[2] Philadelphia Medical Journal, June 3rd, 1899.
[3] THE LANCET, June 23rd, 1901, p. 1530.
[4] Brit. Med. Jour., Epitome, Sept. 15th, 1900.

Bokenham[5] and Denys of Louvain, working independently, have recommended the immunisation of the animals from which the serum is obtained against all the varieties of streptococcus, and several manufacturing firms have adopted this suggestion. It may therefore be expected that such serums will display a wider range of activity than others which contain merely the antitoxin of a single variety of streptococcus. Another cause of the uncertain action of the serum is pointed out by Bokenham. The antitoxin apparently loses its activity after keeping for a certain time and this observer recommends that the serum should not be more than three or four weeks old.

In the case here described the further rise of temperature after the injection of 25 cubic centimetres of the serum is in accordance with what has been observed in many other cases. In some of these the rise has been so well marked that it may be looked upon as a reaction due to the serum. There is at present no evidence to show whether or not this rise may be looked upon as a favourable sign indicating the activity of the serum but it is possible that further observations may show that the phenomenon has a definite value in prognosis.

Another interesting and important point is the secondary attack of effusion into the tendon sheaths in various parts of the body which occurred several days after the primary symptoms had subsided and while the wound in the finger was in process of healing. On looking back through the cases treated with antitoxin this renewed activity of the poison after a period of quiescence appears to be not at all uncommon. It is noted in many cases that after the temperature has fallen to normal and, convalescence being apparently established, the injections have been discontinued a rise of temperature has suddenly occurred, accompanied by a local recurrence of inflammation, by pain in the joints, phlebitis, or some such symptom. A further injection of antitoxin has in most of these cases readily controlled the symptoms but a secondary attack of this nature has been fatal in at least one case in spite of further administration of the serum. The interval at which this recrudescence has taken place has varied from three to ten days or even longer. The question naturally suggests itself, What is the condition of the streptococci during this period? Are they still circulating in the blood, their activity controlled or neutralised by the antitoxin, or has a fresh infection taken place from the primary focus, or again, to adopt the side-chain theory of Ehrlich, are these secondary attacks merely indicative of a release of the toxin from combination with the antitoxin?

A case of puerperal septicæmia recorded by Dr. Grimsdale of Liverpool[6] throws some light on this subject. In this case the blood during the height of the fever gave a pure culture of streptococcus. The temperature fell to normal after two injections of ten cubic centimetres of the serum and remained normal for 24 hours, after which it gradually rose to 103°. During the interval of normal temperature the blood was examined bacteriologically and again gave a culture of streptococcus. The injections were resumed and a favourable result was obtained. This observation deserves more prominence than the author has given it, for not only does it disclose the fact that the streptococci are still circulating and potentially active after the general symptoms have disappeared, but it is also a very striking proof of the efficiency of the antitoxin to control their functions. One may judge from such cases that the injections of serum might be continued with benefit for a longer period after the temperature has returned to normal than has hitherto been the custom, and further, that such patients should be carefully watched during convalescence and that in country districts serum should be kept at hand. Salicylates have apparently a beneficial effect on a number of these cases.

There can be little doubt that the most powerful effect of the serum is obtained by injection in the earliest stages of the infection. In my own case the early and rapid convalescence is to be attributed to the prompt use of the antitoxin. Even in the later stages strikingly beneficial results have been obtained but there must be many unrecorded cases in which this resort to the serum at the eleventh hour has proved unavailing. One practitioner confesses with commendable frankness that he was deterred from using the serum for some days by a perusal of the note of directions issued with the antitoxin. The note ran as follows: "In the present state of our knowledge it may be questioned whether the serum treatment of streptococcal infection should be continued, although some apparently encouraging results have been obtained in this country." The pessimistic tone of this note was no doubt the result of the reports on the earlier cases, in some of which disastrous results were attributed to the use of the serum. Without discussing how far the responsibility for these results rested with the serum it may be said that in the more recently published cases no further ill-effects than a local erythema or an irritating urticaria and in one case "circulatory depression" have been recorded. Blumberg[7] tells us that even these skin affections may be avoided if the serum be injected entirely into the subcutaneous tissue.

Dosage.—A good result has been ascribed to a single dose of ten cubic centimetres but the total amount used in most cases has varied from 30 to 80 cubic centimetres. In my case Mr. Burghard injected 25 cubic centimetres immediately and ten cubic centimetres for the next two days, a further dose of ten cubic centimetres being used on effusion into the tendon sheaths. No ill-effect followed the injection of 80 cubic centimetres in daily doses of ten cubic centimetres in a woman 71 years of age suffering from very severe erysipelas of the face and scalp.[8] Dr. Victor Bonney[9] injected 420 cubic centimetres in 42 injections during 17 days in an obscure case of septicæmia. In another case recorded by Dr. Harold Low[10] 263 cubic centimetres were used altogether, 67 cubic centimetres being injected in 24 hours.

The question of dosage must, of course, be judged by the nature of each case and the effect obtained by the injection, but it is important to know that large doses spread over several days have been used without ill-effect, the more so that the following note is issued in regard to dosage by the makers: "The dose mentioned (10 c.c.) is recorded as one which has been administered with apparent benefit; but it is not stated in the sense of a distinct recommendation. All responsibility for dose rests upon the medical practitioner." The most rational method would seem to be that of a large injection (from 20 to 25 cubic centimetres) on the first occasion, followed by smaller doses as the case may require, and one must further remember that, as has been pointed out above, there is danger of recrudescence if the administration be too early stopped.

The following conclusions may be drawn from this and other recently reported cases and investigations:—

1. That injection of antistreptococcic serum in cases of pure streptococcal infection has been followed by strikingly beneficial results.

2. That variability in the results of the serum in proved streptococcal infection has been due to the selective activity displayed by the antitoxin of each variety of streptococcus or to the serum being used too late in the case or having lost its activity from staleness.

3. That more uniform results are likely to be obtained from the present "compound" antistreptococcic serum than from the earlier forms, from the prompt injection of serum at the commencement instead of near the close of a severe infection, and from the use only of serum which has been recently prepared.

4. That the initial dose may with benefit be increased and that a large quantity spread over several days causes no ill-effect.

5. That the administration of the serum should be continued for some days after the general symptoms have disappeared and a recrudescence thus avoided.

Cavendish-place, W.

[5] Brit. Med. Jour., vol. ii., 1900, p. 1078.
[6] THE LANCET, Jan. 21st, 1899, p. 165.
[7] Berliner Klinische Wochenschrift, Feb. 4th, 1901.
[8] Brit. Med. Jour., vol. i., 1901, p. 1079.
[9] Ibid., vol. i., 1900, p. 1342.
[10] THE LANCET, March 19th, 1898, p. 780.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SPONTANEOUS RUPTURE OF THE HEART IN AN INSANE PATIENT.

BY H. KERR, M.D. GLASG.,
ASSISTANT MEDICAL OFFICER TO THE BUCKS COUNTY ASYLUM.

THIS is a rare occurrence considering the frequency of degeneration of the heart muscle in the insane. According to the returns of the causes of death in the reports of the

Commissioners in Lunacy for the years 1902 and 1903 it occurred nine times in 18,601 deaths and of these four cases were those of males and five were those of females, showing that sex has little to do with its incidence.

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admission, his condition passing into one of mild dementia. Physically he was rather feeble but stout and flabby. The pulse was regular but weak, the heart sounds were feeble and distant in character, and cardiac dulness was considerably increased. There was nothing of importance in the subsequent history of the case and the patient appeared as usual on the night of his death. He was found dead on the floor of his room, having apparently got out of bed and collapsed.

At the post-mortem examination the pericardium was found to be much distended with blood-clot and fluid. In the heart a small tear was found in the left ventricle, anteriorly, at the lower end near the apex in the long axis of the organ and plugged with blood clot. Internally the tear was found to be somewhat smaller than externally. The heart was much hypertrophied (weight 18¾ ounces), more especially the left ventricle, the muscle was soft, fatty, and very friable, while the valves and coronary arteries were atheromatous. The immediate cause of the rupture could not be determined, the factor of extra strain or stress being practically eliminated.

Stone, Bucks.

A CASE OF VARIOLA FOLLOWING AN UNUSUAL COURSE.

BY RICHARD ROLFE, M.B. CANTAB.,
MEDICAL OFFICER OF AVONMOUTH HOSPITAL, BRISTOL.

THE following case presents some very unusual features and, perhaps, similar cases may in part account for the difficulty which is too often experienced in checking an epidemic of small-pox. The patient, a man, aged 30 years, had been vaccinated in infancy and showed four well-marked scars on his left arm. He had by an oversight not been revaccinated, though revaccination had been offered to him and he had been warned of the necessity for it. On Oct. 31st and Nov. 1st he was exposed to infection by entering huts from which small-pox patients were being removed and by helping in their removal. On the evening of Nov. 11th he began to feel out of sorts and on the morning of the 12th he came to me for treatment, complaining of headache and pains in the back and limbs. His temperature was normal. He was sent home to bed and given a saline mixture every four hours. On the 13th he was very ill. The pains in his back and limbs had increased so that he could get no rest; his head also ached. His tongue was thickly furred, he was parched with thirst, and there was complete anorexia. His pulse was full and bounding and his temperature, taken in the axilla, was 103.8° F. He presented all the features of moderately severe initial fever of variola and was removed to a temporary isolation hospital. During the night his temperature fell to normal and he felt quite comfortable when seen in the morning. A careful examination showed no rash on any part of his body. As the onset of his illness had been so typical and the date of his sickening corresponded so exactly with the usual incubation period of small-pox Dr. D. S. Davies, medical officer of health of Bristol, who kindly saw him for me, regarded the case as one of variola sine eruptione and the patient was therefore kept isolated. On the 16th he was revaccinated in three places on his left arm, lymph obtained from Messrs. Ferris and Co. being used. This was done for diagnostic reasons. His temperature remained normal and he felt quite well. On the 18th a few papules appeared about his arms and legs, on his scalp, and the back of his neck. These became vesicular the same day but there was no rise of temperature. At the same time the patient complained of some irritation at the site of his vaccination and all three places swelled a little and looked as if about to take. This swelling, however, passed off in a very few hours. On the 19th there were some 18 or 19 spots on the patient. They were vesicular and were surrounded by a zone of induration. Dr. Davies again saw the case and pronounced it to be undoubtedly one of modified variola. During the next few days several of the spots dried up and disappeared but others, especially two on the left hand, one on the left leg, and one under the sole of the right foot, ran a typical course, becoming pustular and only disappearing after a full fortnight. During this time the vaccination marks several times swelled up slightly and caused some irritation. Nothing very definite happened, however, till Dec. 2nd, 16 days after vaccination, on which day one of the marks assumed the form of a definite vaccine vesicle of quite average size. This occurred just at the time that the variola spots were drying up and seems to indicate that the toxin of variola had held the vaccine, which had been introduced too late to prevent an attack of small-pox, in an inert condition without destroying it until the variola had exhausted itself.

I have to thank Dr. Davies for seeing the case for me and for allowing his name to appear in this account, thereby dispelling any doubt which might arise as to the nature of the rash. Such a case as this might very easily be looked upon as one of influenza; and even if the patient were known to have been in contact with small-pox when no rash was discoverable on the third or fourth day and he appeared well and had a *normal temperature*, a busy practitioner could hardly be expected to follow the case up and would probably dismiss it as cured with possibly disastrous results to unprotected persons who came in contact with it.

During the summer there have been two or three slight outbreaks of small-pox in this locality. Most of the cases have been of an exceedingly mild type with initial symptoms not more marked than in the case described and in many of them the number of spots was very limited. Such unusually modified cases appear to approach the "vanishing point" of variola when the disease no longer becomes recognisable.

Avonmouth.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

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MORG., [illegible]

LEEDS GENERAL INFIRMARY.

A CASE OF ACUTE INVERSION OF THE UTERUS.

(Under the care of Dr. J. B. HELLIER.)

THE patient was a woman, aged 20 years, and was taken into the Leeds General Infirmary from a village about six miles distant on the evening of Nov. 28th, 1904, with inverted uterus. She had been married two and a quarter years. Her first confinement had been difficult; she was in labour three days and had flooding afterwards. On the morning of the day of admission her second labour began at 3 A.M. and she was delivered of a living child at 8.30 A.M., a midwife being in attendance. A medical man was called in after labour and he found the uterus inverted and prolapsed lying on the bed with the placenta attached to it, but there did not seem to have been much loss of blood. He peeled the placenta off and, as he thought, reduced the inversion. Subsequently the patient had much vomiting and the uterus again appeared outside. She was then taken in a cab to the infirmary. On admission she was found to be a poorly nourished but not otherwise unhealthy young woman. She was pale but not blanched; the pulse was 150 and the urine was normal. Dr. Hellier saw her at 10.30 P.M. Chloroform was administered and she was then placed in the lithotomy position and the parts were thoroughly disinfected. The inverted fundus was grasped with the right hand, pressure being made with the finger tips on the periphery of the tumour; at the same time counter-pressure was made with the left hand above the pubes. A few minutes of such bimanual taxis sufficed to reduce the inversion. The surface where the placenta had been attached was rather ragged in appearance but there were no fragments of placenta left adherent. The patient improved rapidly after the operation. On the fourth day the temperature rose to 101° F. and the discharge was a little

offensive, but with the use of an iodine douche this soon improved and she made a very good recovery. The midwife being interrogated declared that she did not touch either cord or abdomen: such a statement may or may not be veracious. The liability of a reduced inversion to relapse at once under abdominal pressure, especially if the reduction has not been quite complete, must be borne in mind.

Remarks by Dr. HELLIER.—The above is, so far as I can discover, the only case of acute inversion of the uterus which has been treated in this hospital since it was opened in 1869. A case of six weeks' standing was admitted in 1889 and this seems to be the only instance of chronic inversion in the records, so rare is this complication of labour. In THE LANCET of July 15th, 1899, p. 151, I published a case of chronic inversion reduced by Aveling's repositor after 29 weeks. The patient is now 29 years of age and it is interesting to notice that she has never conceived or menstruated since. Thus the consequence of the prolonged malposition seems to have been to arrest permanently the uterine functions. She has applied for treatment for debility and anæmia and has taken iron and other emmenagogues but without the desired effect.

Medical Societies.

EDINBURGH OBSTETRICAL SOCIETY.

The Use of the Pessary.

A MEETING of this society was held on Dec. 14th, Dr. N. T. BREWIS, the President, being in the chair.

Dr. G. GRANVILLE BANTOCK, an honorary Fellow of the society, read a paper entitled "In Defence of the Pessary." He said that much had been written about the dangers of the pessary but these arose either from the ignorance, carelessness, or want of skill of the practitioner, or from ignorance on the part of the patient. There were four conditions affecting the uterus to which the use of a pessary was applicable—namely, uncomplicated retroversion, retroflexion, anteflexion, and prolapse. Various pathological conditions might be associated with these displacements but must be treated apart from the displacement. A displacement, properly so-called, was a departure of the uterus from its normal position; hence there was in reality only *one form of displacement—namely, retroversion.* The normal position of the uterus with regard to the axis of the vagina was one of anteversion, and to speak of anteversion as a displacement was obviously incorrect. The only legitimate treatment of a case of uncomplicated retroversion, in which the uterus was perfectly mobile and capable of being raised into its normal position either bimanually or by means of a sound, was the application of a properly adapted pessary. The fact that it required to be worn for years was no valid argument against the use of the pessary; the same objection might be used against the wearing of artificial teeth. Before inserting a pessary the uterus must be restored to its normal position; this could be best effected by means of the sound. The sound for this purpose should be straight from the two and a half inch knob to the end, not curved, and bent more acutely than was ordinarily the case. The bladder should be empty. The fundus was turned forwards and the sound was withdrawn; the cervix was pressed backwards and the intestines were pushed well down behind the uterus. The pessary was now applied. The best instrument was the Albert Smith modification of Hodge's pessary, made of a material that could be readily moulded. A ring pessary was undesirable, as it tended to shorten the vagina, to pull down the cervix, and to increase the descent of the uterus; it also frequently caused a copious discharge which was often offensive. The cup and stem variety was worse and might cause intolerable suffering. Rectocele could not be treated with a pessary; the only effectual cure was the restoration of the perineum. Cystocele could be treated with a vulcanite pessary having a broad diaphragm over its lower half. Anteflexion was not a displacement but a malformation and could not be influenced by a pessary in the vagina owing to the intervention of the bladder. It must be treated from within. The intra-uterine stem—preferably Meadows's combined stem—was often of great service, but anteflexion was not in itself a cause of troublesome symptoms unless associated with narrowing of the internal os. This should be met by dilatation by means of bougies. A proper pessary should not cause leucorrhœa nor did it require frequent examination. The use of a pessary had never been the cause of the loss of a single life but operations undertaken for the relief of displacements of the uterus had not only failed to cure or to relieve but had caused the death of the patient, had caused abortion as the result of imprisonment of the uterus, and had caused rupture of the uterus. When a retroversion was complicated by adhesions, inflammatory states of the appendages, or tumour in the uterine wall, it was not the retroversion that called for treatment but the complicating condition. With regard to the material from which a pessary should be made, Dr. Bantock considered that britannia metal was the best. Indiarubber was apt to lead to an offensive discharge, vulcanite was very difficult to mould into the proper shape, and celluloid did not retain its shape unless it was almost straight. Britannia metal, or "white metal," could be readily altered into any shape, retained its form, was easily cleaned and polished, and could be worn for years. Aluminium would be a good material on account of its lightness but it was difficult to mould.

Dr. MURDOCH CAMERON (Glasgow) said that if the posterior fornix was shallow and the vagina straight he used a Hodge pessary; if the posterior fornix was deep and the vagina wide he used an Albert Smith pessary. He never used one having a crossbar; he once had occasion to cut a crossbar out of the cervix. For cystocele he had never found a boat-shaped pessary fail to give relief. He used a ring pessary for prolapse if the patient would not submit to operation and if no other pessary would stay in. It was only in very bad cases that he would advise abdominal fixation. If a patient suffered from a retroversion before a pregnancy he inserted a pessary six days after labour and this often effected a cure.

Professor A. R. SIMPSON said that he agreed generally with the views expressed in Dr. Bantock's paper. Pessaries were suitable for uncomplicated posterior displacements of the uterus but these uncomplicated cases were not very frequent. Vulcanite was the material which he preferred. There were no dangers in the use of a pessary in an appropriate case by a skilled hand but the same might be said with regard to operations. There were cases in which a pessary tended to press on sensitive ovaries. In operating he preferred the intraperitoneal shortening of the round ligaments or abdominal fixation. There were drawbacks to the use of a pessary if the patient was not intelligent enough to exercise the necessary care of it. Neglect of a pessary was dangerous if the patient was approaching the menopause when owing to the shrinking of the vagina it might ulcerate into the vagina, the rectum, or the pouch of Douglas.

Dr. D. BERRY HART said that there was a certain field for pessaries in cases of retroversion occurring after labour and in multiparæ. The future of operative procedure would be to a great extent connected with operations on the round ligament.

Professor J. A. C. KYNOCH (Dundee) said that in backward displacements a pessary would sometimes cure recurring abortions due to that cause.

Dr. A. H. F. BARBOUR and Dr. F. W. N. HAULTAIN expressed the opinion that much might be said in favour of the operation of shortening the round ligaments.

The PRESIDENT said that he advised operation in all stages of prolapse as there was commonly a weakening of the pelvic floor in these cases. If the patient were too weak for operation he found the disc and shelf pessaries the most useful.

Dr. JAMES RITCHIE, Dr. E. W. SCOTT CARMICHAEL, Dr. GEORGE HUNTER, Dr. J. W. BALLANTYNE, and Dr. J. HAIG FERGUSON took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Bulbar Paralysis.—Pityriasis Rubra.—Ichthyosis.—Syringomyelia.

A MEETING of this section was held on Dec. 9th, Dr. J. HAWTREY BENSON being in the chair.

Dr. J. B. COLEMAN exhibited a case of Congenital Bulbar Paralysis.—Dr. F. C. PURSER said he had to thank Dr. Coleman for having given him opportunities of examining the case in hospital. There were cases of congenital or infantile bulbar paralysis recorded but they differed from the

present case in this respect, that there was a strong family history of the disease having occurred in more than one member of the same family, the parents also having been blood relations; also the upper part of the face was as much affected as the lower. There were two theories which in his opinion might account for the symptoms Firstly, there might be an affection of the nerves themselves rather than of the nuclei from which the nerve fibres arose. Secondly, a primitive myopathy might have affected the involved muscles. He certainly had never heard of such an occurrence, but a hereditary disease had to begin somewhere.

Dr. COLEMAN also showed a case of Pityriasis Rubra which he said might have been better called exfoliative dermatitis. The only treatment used was calamine lotions and olive oil or olive oil and lime water—simple emollients He had not given arsenic on account of the acuteness of the case. There had been a distinct improvement during the last week.

Dr. T P. C KIRKPATRICK showed a well marked case of Ichthyosis Simplex The patient, who was a man, aged 25 years, stated that the condition had been present as long as he could remember but that none of his family ever had any similar condition He had been recently infected with primary syphilis and was now developing an extensive secondary pustular eruption on the trunk and limbs The ichthyotic condition of his skin has not caused him any serious inconvenience —Dr. O'BRIEN said that a patient under his care, a man aged 26 years with all his organs healthy, had suffered from the condition for 14 years. He had three brothers and two sisters who suffered from eczema.

Dr. J. F. O'CARROLL reviewed three cases of Syringomyelia which he had formerly had under his care and gave an account of the symptoms of a fourth patient who had died recently. In this case the appearances were practically those of amyotrophic lateral sclerosis, with marked wasting in the muscles of the upper limbs and some clawing of the hands The remarkable feature of the case was the absolute absence of anæsthesia of any kind, though frequently searched for, coupled with tenderness to pressure of the second and third dorsal vertebræ and of the right second rib, which had led to a diagnosis of disease of those vertebræ inducing a compression myelitis The cavity in the cord extended through the cervical and dorsal regions, was about five millimetres in average diameter, and in some places was twice as much

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SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Dec. 16th, Dr. Frederick Taylor being in the chair—Dr C. J Macalister (Liverpool) opened a discussion on Sudden and Unexpected Death in Children and dealt mainly with a class of cases which appear to be due to toxic influences He referred especially to the sudden deaths which take place in institutions devoted to the care and keeping of children. He quoted several cases in his own experience where children, sometimes with hardly any prodromal symptoms, in other cases with a few hours suffering from headache and diarrhœa or vomiting, had died in a cyanosed condition from asphyxia At the post mortem examinations sometimes a very localised patch of pulmonary consolidation had been found, at others a general congestion of the lungs such as might be found in any case of suffocation, but no lesion of the nervous system had ever been discovered to account for these deaths and he considered that they were probably due to a poison which exerted its influence upon the respiratory centre In the institutions in which these deaths had occurred it was found that collective bathing was frequently in vogue and Dr Macalister pointed out how saturated the water became with organic matter and micro-organisms after a number of children had been washed in it and that in one school where this method of bathing was altered about five years ago these deaths had practically been stamped out and the general health of the children had been vastly improved Dr Macalister quoted a case from the practice of Dr Harris of Birkenhead of an appallingly sudden death in an infant who had previously been healthy and he felt disposed to ascribe this type of case (as suggested by Buzzard long ago) to infantile paralysis attacking the centre for the vagus In conclusion it was pointed out that some patients who had been thought to be suffering from simple diarrhœa or some unimportant febrile disturbance had died suddenly and had proved to be examples of enteric fever, and he mentioned also examples of sudden death following diphtheria, in fulminating small pox, and in gangrenous varicella. —Dr. J. Porter Parkinson, among other causes, mentioned spasm of the glottis resulting fatally from pressure of an enlarged gland on the recurrent laryngeal nerve.—Mr J W. Thomson Walker discussed the subject in relation to the thymus gland and the status lymphaticus Mr Walker laid stress on the association of rickets, adenoid tissue in the naso-pharynx and laryngismus, also on the state of lymphatism as an important factor in producing a fatal issue in an otherwise simple illness He discussed the pathology in reference to the pressure and toxic theories, an excess of thymic secretion or some other poison. Cases might be diagnosed from evidence of an enlarged thymus if there was anything to suggest lymphatic hyperplasia —Mr A H. Tubby considered the surgical causes in reference to circulatory conditions and to shock and the means of diminishing it Among toxic conditions he mentioned the absorption of iodoform and carbolic acid, toxins, and uræmia.—Dr. J. Blumfeld referred to deaths in connexion with anæsthetics, confining his remarks to those cases of sudden death in children during or after anæsthesia in which the ailment had caused no loss of general health. The importance of a skilled anæsthetist for infants could not be over estimated. Death in the pre anæsthetic stage almost always occurred with absolute suddenness and was due to too strong a vapour of chloroform —Dr Frederick Taylor drew attention to the occurrence of sudden death in the course of disease not necessarily imme[illegible] he thought, [illegible] —Dr A Yo[illegible] than was suppo[illegible] conclusions on post-mortem examinations. Recently he had found the thymus persistent in several cases of sudden death. —Dr Edmund Cautley insisted on the importance of the subject to general practitioners, for most of these cases came under their notice, and they had to make the necropsies and to give evidence before the coroner He detailed two such cases in which death had been ascribed to "mesenteric" disease and to typhoid fever In neither were the history of [illegible] f the child shortly before death, [illegible] sufficient to warrant these diag[illegible] o ascribe the deaths to the status [illegible] uthrie remarked on congenital [illegible] syphilis as a cause and on the effects of too rapidly curing an extensive cutaneous eruption —Mr. Arthur Edmunds thought that evil effects from sudden cure of eruptions were due to toxic absorption. He had seen similar results due to extensive skin grafting

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec 7th, Dr. J S Bury, the President, being in the chair.—Dr. R W Marsden exhibited an Unusual Case of Late Rickets The patient was a female, 19½ years old Skiagrams of the affected ends of the long bones were shown, the most prominent feature being a remarkable increase in the breadth of the epiphyseal cartilage Dr Marsden suggested that this appearance might constitute a more trustworthy test as to the presence of rickets than the enlargements of the ends [illegible] of the lo[illegible] rickets wa[illegible] (2) localise[illegible] primary a[illegible] expressed [illegible] absence of [illegible] faulty nutrition or unhygienic surroundings by their influence on the composition of the blood were able so to alter its characters as to prevent it serving its proper function in a perfect manner, and thus lead to what was designated as rickets —Dr A Hill Griffith gave a short account of the Operative Treatment of High Myopia as first introduced by Fukala in 1890. He had himself only done ten cases and as far as he knew very few cases had been done in Manchester All his cases had been quite successful although in two the discission was followed by acute glaucoma the same night. In suitable [illegible] was to be commended —Dr W. Milligan [illegible] ts Surgical [illegible] specimens [illegible] were shown by Dr E M [illegible] J Burgess, and Professor R B. Wild showed a collection of Indian Drugs, presented to the museum by the Imperial Institute

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 2nd, Mr. C. M. Tuke, the President, being in the chair.—Dr. A. E. Russell read a paper on the Diagnosis of Acute Abdominal Diseases. After describing the methods of examination and the order of procedure he said that for the formation of an opinion as to the nature and progress of the case the general condition of the patient, with especial reference to the pulse, facial aspect, and vomiting, was nearly as important as the local abdominal signs. He strongly deprecated giving opium in cases of doubtful diagnosis. The advisability of early operation in grave cases was insisted upon.—Mr. D. J. Armour said that he did not agree with Dr. Russell with regard to the facies and related three acute cases none of which showed by their appearance the slightest sign of their condition.—Mr. E. P. Paton drew attention to one feature not mentioned by Dr. Russell—namely, the "quiet period" following immediately after the acute onset and he warned practitioners not to be misled by this, as the acute symptoms often returned in an aggravated form.—Mr. W. McAdam Eccles alluded to another point not mentioned by Dr. Russell—namely, hyperæsthesia. With reference to the administration of morphine Mr. Eccles advised one dose subcutaneously when the patient had to be removed, but if an operation was to be undertaken at the patient's own house without any removal he strongly advocated that no morphine or opium should be given.—Dr. Seymour Taylor, Mr. L. A. Bidwell, Dr. J. A. Mansell Moullin, and others also took part in the discussion.

PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 8th, Dr. W. C. Taylor occupying the chair.—Mr. Percy Rose showed an infant six weeks old who was recovering from an attack of Tetanus. Comments on the case and on the disease were made by Dr. R. Hatfield, Miss L. G. Simpson, and Dr. E. Hay.—Dr. T. D. Lister read a paper on the Treatment of Phthisis at Home. He started by giving an outline of the pathology of phthisis, illustrating his remarks by a series of full-sized sections of tuberculous lungs kindly lent for the purpose by Professor G. Sims Woodhead. The principles of the open-air treatment of phthisis were next dealt with and the lecturer insisted particularly on the importance of the isolation of the patient, the disinfection of surroundings, and the disinfection of the sputum. Dr. Lister then alluded to certain drugs which were useful aids in the home treatment of phthisis. He thought creasote and its derivatives had almost a specific action but were contra-indicated in cases accompanied by hæmoptysis. Asafœtida in the form of pilula galbani co., onions, garlic, and similar aromatic bodies were also of value. The lecturer also showed a nebuliser and a portable form of steam kettle which could be used in the inhalation method of treatment.—The meeting closed with a vote of thanks to Dr. Lister for his lecture and to Professor Woodhead for the loan of the specimens.

ROYAL MEDICAL SOCIETY, EDINBURGH.—A meeting of this society was held on Dec. 16th.—Dr. J. Purves Stewart read a paper on Affections of the Cervical Sympathetic System. He first described the anatomy of the system and then went on to give an account of the effects of paralysis of the cervical sympathetic, mentioning enophthalmos, paralysis of the sweat glands, and some other conditions. He next described the effects of irritation, including exophthalmos, profuse sweating in the area supplied, and von Græfe's sign. He concluded by mentioning some cases in which excision of the superior cervical ganglion was performed in the hope of benefiting glaucoma and epilepsy.—Dr. John Allan contributed a paper on Intra-abdominal Inflammations which was read by Mr. J. D. Wells.

Reviews and Notices of Books.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India: On a Parasite found in Persons suffering from Enlargement of the Spleen in India. Second report. By Lieutenant S. R. CHRISTOPHERS, M.B. Vict., I.M.S. New series, No. 11. Calcutta: Office of Superintendent of Government Printing, India. 1904. Pp. 21. Price Rs. 2 or 3s.

IN his previous report the author recorded briefly the researches of different observers with regard to the parasite recently discovered by Leishman and Donovan in cases of tropical splenomegaly. These investigations showed the presence of certain definite bodies of peculiar nature and uniform morphology which were imbedded in a matrix the actual nature of which has been much discussed, Laveran and Mesnil holding it to be altered red corpuscle, Ross a parent mass producing the bodies, and Manson and Low a zooglæa mass. The author considered in his last report that it consisted of the cytoplasm of cells in which the bodies are seen lying. Next Wright found the same bodies in tropical ulcer. In the present report Lieutenant Christophers describes the necropsies in four further cases, and from the consideration of the whole number of necropsies it is found that there are almost pathognomonic appearances in the liver and spleen, whilst the parasites are found in immense numbers in these organs, the bone marrow, the intestine, skin, the lymphatic glands, the lungs, and in the blood of large veins. Attention is next drawn to the clinical and pathological nature of the disease, the chief symptoms being: (1) a great splenic enlargement very constant but sometimes only moderate; (2) emaciation generally but not invariably present; (3) an irregular temperature almost always present in the final stages but it may be absent; (4) abdominal symptoms. (The latter constantly supervene and are due to the ulceration of the large gut, gangrene of the rectum, or perforation. In only one of the cases was the mucous membrane normal. The above lesions were associated with the presence of the parasites.) (5) The occurrence of noma and local gangrene; (6) the frequent presence of a papular eruption and of ulcers in the skin (the latter were found about the knees and elbows, the former about the trunk, arms, neck, thighs, Scarpa's triangle, and scrotum and the parasites were present in them); and (7) hæmorrhages both petechial in the serous membranes and large extravasations in similar positions and in the mucous membranes.

The author next considers the relation of the parasite to the tissues of the host, the skin, lymphatic glands, viscera, and peripheral blood being examined. In whatever position the bodies are found they are almost invariably contained in the cytoplasm of cells; two types of the latter so far only have been observed to harbour the parasite—viz., the leucocytes and cells of endothelial nature; but it is especially the vascular endothelium which is involved in the type of infection giving rise to splenomegaly. The most marked change in the blood is the leucopenia which, as a rule, is so great that the observer has to take several films in order to make adequate leucocyte counts. Lieutenant Christophers considers it probable with regard to the part played by the spleen and the liver that auto-infection of the splenic and hepatic epithelium is constantly going on and forms the chief process in the disease, whilst the fact that the bodies are found so largely distributed in the viscera, large veins, and lymphatic glands shows the wide dissemination of the parasite. The life of the latter would seem to be spent in the cytoplasm of an endothelial cell and the final disintegration of large necrotic cells is the means whereby fresh swarms of the bodies are set free to be taken up again by the endothelial cells of the spleen and elsewhere.

Regarding the morpholgy of the parasite the author notes the presence of two chromatin masses in the bodies and holds also that the matrix consists of the fragmented and budded cytoplasm of cells of endothelial nature or of the residual matter from the separation of the multiple division forms described by Laveran. The final conclusions of the author are to the effect that the bodies described by Wright are indistinguishable from those found in cases of enlarged spleen in Madras; that the bodies are very numerous in the spleen, the liver, and the bone marrow in the so-called malarial cachexia; and that the cachexia is essentially an

infection of the vascular endothelium resembling a chronic septicæmia, whilst in the process of infection the bodies are taken up by the endothelial cells which increase in size and undergo necrosis and rupture, when the contained bodies are again taken up by cells. This monograph is illustrated by two excellent plates showing the various processes detailed in the text and the whole constitutes an excellent piece of work on the part of the author.

City Development: A Study of Parks, Gardens, and Culture Institutes. A Report to the Carnegie Dunfermline Trust. By PATRICK GEDDES, Professor of Botany, University College, Dundee. With Plan, Perspective, and 136 illustrations. Edinburgh, Westminster, and Birmingham: Geddes and Co. 1904. Medium 4to, pp. 232 Price 21*s.* net.

THIS volume is one of practical purpose. Its main contents are a plea and a plan for conserving and developing the amenities of the small city of Dunfermline and its constructive proposals are based upon a photographic survey of its present and a re-reading of its past. The monograph is at once naturalistic, horticultural, architectural, educational, and social. Its preparation has necessitated wide inquiry and general reflection; in fact, as is pointed out, "its local questions inevitably raise the general ones of city life and development; for the needs and problems of health, leisure, and recreation, of education and social betterment, are becoming much the same for all cities." The purpose of Mr. Carnegie's great gift, in connexion with the utilisation of which this report has been called into being, has been from the first explained by its donor to his trustees as not only a local but an experimental and general one: "The very problem you have to solve is 'what can be done in towns for the benefit of the masses by money in the hands of the most public-spirited citizens?'" While the last generation had to carry out great works of prime necessity, as of water-supply and sanitation, a new phase of civic development has arisen—that of insuring healthier conditions, of providing happier and nobler ones. Professor Geddes submits "these necessarily rapidly produced designs under correction and with due openness to their amendment' for the beautifying and betterment of old Dunfermline, and suggests that the time has come to be setting about the same thing in other cities. The scheme with its many real and ideal pictures shows how great a difference tasteful treatment might make in dealing with our towns. The book is full of practical suggestions sketched in with the brush of an artist and the pen of a poet. We must congratulate both the author and the Carnegie Trust on the appearance of this volume—it may carry suggestions to the architects of many local authorities.

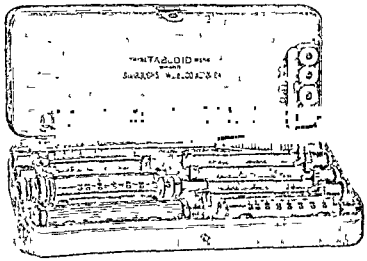
Climate and Health in Hot Countries and the Outlines of Tropical Climatology. By Lieutenant-Colonel G M. GILES, M.B. Lond., F.R.C.S. Eng., I.M S. (retired) London: John Bale, Sons, and Danielsson, Limited. 1904. In two Parts. Part I., pp. 184. Part II., pp. 109. Price 7*s.* 6*d.* net; or Part II. alone, 5*s.* net.

THIS book is issued as "a popular treatise on personal hygiene in the hotter parts of the world and on the climates that will be met within them." It is a very readable volume, full of advice, suggestions, and plans for preserving health which, if followed out, must prove a boon to any household in a hot climate. Colonel Giles rightly remarks that since the Indian Mutiny great improvements have been introduced in India but that a great deal more remains to be done, especially in the matter of utilising our recently gained knowledge of the causation of malaria. His chapter on Malaria is admirably practical. He says that with due care and attention to sanitary laws, as modified by the altered conditions, there is no reason why the rates of sickness and mortality in India should be much more formidable than elsewhere. As Part I. of the book is intended for the non-professional reader all technical terms have been, as far as possible, avoided. The climates of the hotter parts of the world vary even more widely than those of the temperate zone, so that, as the author says, it is often impossible to offer suggestions applicable to all of them, and on this account it is extremely important that the intending resident should be able to ascertain what is the exact nature of the climatic conditions with which he will have to cope. In this work some account of the climates of the various countries included in the enormous areas under consideration is given and this is why the book has been divided into two parts, each separately paged and indexed. Part I. is devoted to personal tropical hygiene, while Part II., which deals with climate, is mainly a mass of tabulated information of which only the few pages devoted to the country which he proposes to visit are likely to interest the individual reader. The information in Part II. is based on, or obtained from, the official records of the various meteorological observatories and these outlines of tropical climatology are published in a separate volume for the use of the professional reader. Both parts of this volume are full of valuable information. Part II. will bear further extension as more details are collected and doubtless will be kept up to date by the author. We are glad to be able to recommend the book as useful and suitable to those for whom it is intended.

New Inventions.

A LUMBAR-PUNCTURE SYRINGE CASE.

Messrs Burroughs, Wellcome, and Co. have made to my design a lumbar-puncture syringe case, an illustration of which is given below, and they have taken a great deal of trouble to embody in it all the points I have suggested as necessary for the successful performance of the operation of lumbar puncture under the difficulties met with in Africa. It contains two



syringes, six needles, a metal handle, two rubber connexions, and a small instrument for cauterising the skin at the spot selected for the puncture. The metal handle is made so as to allow of its being screwed to each of the needles, thus insuring complete control over the needle during the puncture. The short rubber connexions for use between the needle and the syringe are also made to screw into the needles but are attachable to the syringe in the ordinary way. When the patient is not anæsthetised the operation is difficult and dangerous if the syringe is used as a handle without any rubber connexion. Another detail of importance to be noted is the shape of the needle-point which, if too long and sharp, as usually made, is apt to prick the cord or membrane and thus to vitiate statistics by admitting blood into the fluid, which can easily be drawn off without containing a single red-blood cell if the apparatus is suitable. The case and instruments being all metal can be completely sterilised.

Liverpool School of Tropical Medicine. C. CHRISTY

THE LANCET.

LONDON: SATURDAY, DECEMBER 31, 1904.

THE ANNUS MEDICUS 1904.

WE publish, as on previous occasions, a brief account of the principal medical events of the past twelvemonth. Year by year, as medical science enlarges her boundaries, it becomes more impossible to include within the scope of any *résumé* all the important developments that come rightly under our purview. Yet we think that a summary, even though it can only take note a little baldly of the more obvious steps forward, is of service. It enables our readers to see how definitely the story of modern medicine is a story of progress, while it affords many conveniences for reference in the future.

MEDICINE AND THERAPEUTICS.

Sleeping Sickness and Tropical Pathology.

ONE of the most interesting subjects that has occupied the attention of the medical world during the past year has been the etiology of sleeping sickness. The investigations were commenced in 1902 by an expedition despatched to Senegambia by the Liverpool School of Tropical Medicine. This was followed by a commission sent out to Uganda in 1903 by the Royal Society. Although the reports of this commission were published in 1903 more prominence was given to the matter by a discussion at the Epidemiological Society on Dec. 11th, 1903, and Jan. 15th, 1904. We do not intend to discuss the question of priority in the discovery of the cause of sleeping sickness but trust that to all concerned in the inquiry will be accorded the thanks which they deserve. The names of Colonel D. BRUCE, R.A.M.C., Sir PATRICK MANSON, Captain E. D. W. GREIG, I.M.S., Dr. A. CASTELLANI, Dr. L. W. SAMBON, Dr. D. NABARRO, Dr. J. E. DUTTON, and others will always be connected with this work and doubtless honour will be given to all those who have assisted in this important investigation. There is now strong reason to suppose that the cause of sleeping sickness is a parasite, a trypanosome, which is always present in the cerebro-spinal fluid of patients suffering from the disease. There is also sound ground for believing that there is a close connexion between the so-called "trypanosoma fever" and sleeping sickness. It has been further shown that the distribution of the disease coincides with the distribution of a biting insect—a tsetse fly, the glossina palpalis. Experiments which were conducted go far to show that the trypanosomes are transferred to man by means of that insect. The remarks made by various speakers at the discussion to which we have referred demonstrated, however, that while the cause and mode of transference of sleeping sickness are believed to have been discovered, nevertheless further scientific investigation will be required before the etiology can be considered as entirely settled. If it be conclusively proved that the disease is spread by means of the tsetse fly most valuable information in regard to the possible prevention of the malady will have been procured.

A preliminary report of considerable interest was issued from the Johnston Tropical Laboratory of the University of Liverpool by Dr. H. WOLFERSTAN THOMAS and Dr. STANLEY F. LINTON, in instituting a comparison of the animal reactions of the trypanosomes of Uganda and (Free State sleeping sickness with those of the trypan Gambiense. These observers came to the conclusion the trypanosomes found in (*a*) the cerebro-spinal flu cases of Uganda sleeping sickness; (*b*) the cerebro- fluid of cases of Congo Free State sleeping sick (*c*) the blood of cases of Uganda trypanosome fever (*d*) the blood of cases of Congo Free State fever a identical as regards their reactions and morphology the trypanosoma Gambiense. They further are of o that there seems to be no acquired immunity a infection; that there is no transmission of immuni offspring; and that an animal which seems to hav covered many months later "shows parasites" once apparently as the result of lowered vitality.

Another organism which is destined to play a prom part in the pathology of tropical diseases is the variously known as the "new body," the Leish Donovan body, and the piroplasma Donovani. Sept. 10th we published in THE LANCET (p. 74 communication by Major C. DONOVAN, I.M.S., on H Piroplasmosis, in which is given a minute account of parasite. That the "new body" is a piroplasma seems to question; the weight of evidence tends to the belief th is a form of trypanosome and Captain LEONARD ROG I.M.S., has announced that he has seen the Leish Donovan body develop into trypanosomes. It may be that "new body" belongs to neither form of parasite and it even been suggested that it may be the resting stage o malarial organism, although there is no direct evidenc support of this proposition. Whatever name be ultim bestowed on the "new body" there can be no doubt a its importance. The numerous cases of malarial cach the fatal malady of kala-azar in Assam, and many of irregular and indefinite tropical fevers upon which qui has no beneficial effect have suddenly received an expl tion which promises to revolutionise diagnosis in tro medicine. A large field for inquiry is thus laid open.

Snake Venoms.

A lecture was delivered on June 9th, 1903, in the Ph logical Laboratory of the University of London by Ca ROGERS, I.M.S., and was published in our column Feb. 6th of this year (p. 349). The subject was Physiological Action and Antidotes of Snake Venoms a Practical Method of Treatment of Snake Bites. subject is one replete with interest in connexion with Indian Empire. Captain ROGERS carried out a serie experiments to test a method of treatment suggested Sir LAUDER BRUNTON and Sir JOSEPH FAYRER. A liga is placed round the limb above the seat of inoculatio the venom, an incision is then made through the plac injection, and pure crystals of permanganate of potas moistened with a little fluid are rubbed in with a ne neutralise as much as possible of the venom before it had time to be absorbed into the circulation. The exp ments were attended with promising results and Ca ROGERS considers that the method should be used in ac practice, especially as it is efficient against all kinds of sn venom.

Tuberculosis.

The Royal Commission which, under the chairmanshi Sir MICHAEL FOSTER, was appointed to inquire into relations of human and bovine tuberculosis as a re of the startling announcement made by Professor K at the British Congress on Tuberculosis of 1901, ac wisely in issuing an interim report. The points refer to the commission were grouped under three hea (*a*) whether tuberculosis in the lower animals is and the same; (*b*) whether the lower animals and n can be reciprocally infected with it; and (*c*) under w conditions, if at all, transmission of the disease fr

the lower animals to man takes place and what are the circumstances favourable or unfavourable to such transmission. The interim report goes far to answer completely the question put in (*a*) and partially the problem presented in (*b*). As regards the identity of the human and bovine disease the commissioners state that after careful comparison they have "found the one, both in its broad general features and in its finer histological details, to be identical with the other," and they have failed to discover any character by which they could distinguish the one from the other. The commissioners further made the following significant announcement: "That tubercle of human origin can give rise in the bovine animal to tuberculosis identical with ordinary bovine tuberculosis seems to us to show quite clearly that it would be most unwise to frame or modify legislative measures in accordance with the view that human and bovine tubercle bacilli are specifically different from each other and that the disease caused by the one is a wholly different thing from the disease caused by the other." The further report of the commission will be awaited with interest.

Dr. ALEXANDER MARMOREK announced that he believed he had succeeded in preparing the "real tuberculous toxin *in vitro*." The value of the preparation was investigated by Dr. ARTHUR O. LATHAM who came to the conclusion that it does produce a specific antitoxic effect and that with proper precautions and in suitable cases does no harm. He considered that an extended trial of the remedy should be made.

Scarlet Fever.

Mr. R. E. LAUDER, medical officer of health of the county borough and port of Southampton and medical superintendent of the borough and port fever hospital, made an interesting inquiry into the source of scarlatinal infection and its bearing upon hospital treatment. The conclusions at which he arrived are not altogether in accordance with those usually accepted. In most fever hospitals the practice is adopted of treating all cases of scarlet fever in the general wards until such time as peeling and discharges have ceased. Patients leave the hospital by being passed through the "out-bathing station." Mr. LAUDER adopted a different method by providing a large number of small wards, so that patients could be differentiated according to the stage of the disease. He claims that by following out this plan complications occurred much less frequently and that the duration of the fever and the length of stay in bed were reduced. In 1902 the average stay in hospital was 48 days, and in 1903 (when these measures were tested) 34 days; in the former year the "return" cases amounted to 4 27 per cent. and in the latter year to 2·15 per cent. We believe that Mr. LAUDER is correct in the method which he has adopted. It is the line that we have recommended in THE LANCET in dealing with the isolation hospital problem and although such a provision means probably greater initial and administrative expenditure, if the duration of stay in hospital is thereby curtailed a greater number of cases can be accommodated in a given time.

Lectures of the Year.

We published in full in THE LANCET as usual the official lectures delivered before the Royal College of Physicians of London. The Lumleian lectures were delivered by Dr. FREDERICK TAYLOR who chose as his subject Some Disorders of the Spleen. Dr. TAYLOR came to the conclusion that the spleen is more sinned against than sinning; that it is rarely responsible for the lesions which it suffers or for the complaints with which it is associated; that in the various infective disorders, in splenic anæmia and in infantile anæmia, it is probably poisoned from without; that in the different forms of leukæmia it is overcharged with the excess of leucocytes; and that only in splenic anæmia as yet is the charge seriously made against it that itself having been poisoned from the bowel it subsequently inhibits by fresh production of poisons the formation of the blood. Dr. ROBERT HUTCHISON was the Goulstonian lecturer, selecting as his theme Some Disorders of the Blood and Blood-forming Organs in Early Life. He brought into prominence the peculiar nature of the problems presented by a study of the blood in children. He drew especial attention to the absence of sharp differentiation between the types of anæmia in early life. He showed that the splenic anæmia of infancy tends to fade off at the lower end of the scale into the severer forms of secondary anæmia and at the upper into the leukæmias. He also pointed out that forms of anæmia occur in early life which partake of the characters both of the lymphatic and of the myelogenous type, whilst between lymphatic leukæmia, chloroma, and lympho-sarcoma fixed boundaries can hardly be drawn. The Croonian lectures were intrusted to Dr. J. ROSE BRADFORD, his subject being Bright's Disease and its Varieties. Many interesting points were touched upon in reference to clinical and pathological characters of the various forms of nephritis, one of the most important conclusions being that the contracted white kidney is a distinct entity and not necessarily related to the large white kidney or the true granular kidney. The Oliver-Sharpey lectures were delivered by Dr. GEORGE OLIVER who reminded his hearers that the aim of the endowment of these lectures was to foster the application of physiological knowledge to the prevention, alleviation, and cure of disease and the prolongation of life. Dr. OLIVER selected as his subject Recent Studies on the Tissue-Lymph Circulation. In the first lecture he presented the results of recent work by himself and by others concerning the physiological conditions of the tissue-lymph circulation, while in the second he gave numerous valuable indications of the deductions which may be drawn and of the influence which these researches will probably have upon the medicine of the future.

SURGERY.

During the past year, as in many previous years, the advances in surgery have mainly been connected with the abdomen and this is chiefly to be attributed to the fact that it contains so many important organs.

Gastric Ulcer associated with Appendicitis.

The surgical treatment of perforated gastric ulcer is now so firmly established and the results are so excellent that there is but little room for improvement. We have during the year published a number of cases in which recovery has followed the suturing of perforated ulcers of the stomach but two cases deserve special mention, for accompanying the gastric perforation was an appendicitis. One case was under the care of Dr. HAYDOCK WILBE. The patient was a boy, aged 13 years, who had severe abdominal pain on the right side and around the umbilicus. Vomiting was absent and there was no rise of temperature. Mr. W. WATSON CHEYNE saw the patient on the same evening and an incision was made over the appendix region and gas and turbid liquid escaped. The appendix was thickened, reddened, and contained a large concretion but it was not perforated. The appendix was removed. It was obvious that some other lesion must be present and as much of the small intestine had protruded at the wound and was not injured and as no fæcal material was present it was thought probable that the perforation was situated in the stomach. The abdomen was opened over the stomach and the viscus was examined, and it was only after much searching that a small perforation was found on the anterior wall high up under the diaphragm. The perforation was closed and the two abdominal wounds were sutured, drainage-tubes being inserted. The patient recovered. This

case is also noteworthy for the age at which a gastric perforation occurred, being probably the earliest on record. The second case was under the care of Mr. V. WARREN LOW in St. Mary's Hospital. The patient, a girl, aged 17 years, had had pain for five days in the right iliac region. She also had had pain in the epigastrium. On the day before admission she was seized with a sudden acute abdominal pain with vomiting and she was removed some hours later to the hospital. On examination it was found that the abdominal walls were rigid and did not move on respiration. The pain was referred chiefly to the lower abdomen and more to the right than to the left side. There was dulness in the flanks. By the application of warmth and stimulants the collapse passed off and the abdomen was opened over the appendix region, some purulent fluid escaping. The appendix was thickened and contained two concretions but it was not perforated. It was removed but it was recognised that there was probably some other cause of the general peritonitis, so the ovaries and tubes were examined and though much congested as part of the general peritonitis they seemed otherwise healthy. A median incision was made above the umbilicus and it was then obvious that the peritonitis there was more pronounced. After some difficulty a perforation was found on the small curvature of the stomach near the cardiac end. The perforation was sutured. A drainage-tube was inserted just above the pubes and at the upper incision but the wound over the appendix was closed. In spite of some troublesome vomiting for a few days after the operation the patient recovered perfectly. In both these cases the association of the gastric ulceration with the appendicitis may have been mere coincidence but it is more probable that there was some causal nexus between them.

Appendicitis associated with Gastric and Duodenal Ulcer.

Closely allied to the above-mentioned cases are two described in a paper by Dr. H. A. LEDIARD and Dr. R. E. SEDGWICK. In one of these, a man, 56 years of age, complained of pain in the right iliac fossa and as three attacks occurred it was decided after the third attack to remove the appendix. This was done though the appendix showed no signs of acute inflammation but it was broader than normal and had old lymph on its surface. The patient went on well for five days and then passed tarry stools. The melæna continued even after the wound had healed and the patient died from exhaustion six weeks after the operation. At the necropsy it was found that a deep ulcer existed in the duodenum, whence came the hæmorrhage, but it could not be decided whether this ulcer had existed before the operation for appendicitis or was consequent on it. In the other case, that of a girl, seven years of age, an abscess appeared in the appendix region and was drained but the appendix was not removed. The patient did not do well after the operation and a week later a swelling appeared in the epigastrium. This was incised and an abscess was found which communicated with the cavity of the stomach through a perforation and later food escaped through this epigastric incision. This opening in the stomach was closed but the stitches cut out and a few days after this the patient died from exhaustion. As the gastric perforation was larger on the peritoneal aspect it was considered to have proceeded from the abscess in front of the stomach and not improbably it was secondary to the appendicitis.

Treatment of Duodenal Ulcers.

The question of the best mode of treatment of duodenal ulcers has not yet been decided and in this connexion a case recorded in THE LANCET is of great interest. A patient, 42 years of age, had an attack of hæmatemesis and again two months later he had a second attack. Three other attacks occurred at longer intervals and it was noticed that progressive gastric dilatation was occurring. He was treated by Mr. R. THORPE, under whose care he was, with careful dieting and improved, but in April, 1904, he had severe abdominal pain with vomiting of a brownish fluid. Two days later very severe pain occurred in the abdomen shooting upwards over the liver and downwards to the right inguinal region and right testis. There was intense collapse and a diagnosis of perforation of the stomach or the duodenum was made. Mr. H. W. ALLINGHAM operated, making a median incision between the ensisternum and the umbilicus and much extravasated material was found. The stomach was carefully examined but no perforation was discovered, though it was seen to be much dilated. In the duodenum two inches from the pylorus was found a large ulcer which had perforated. This was sutured and the abdominal cavity was flushed and sponged. The abdominal wound was closed, a gauze plug being left at its upper and lower ends. For 14 days the patient did fairly well but then hæmatemesis returned and for 48 hours he was fed by nutrient enemata, adrenalin being given; then feeding by the mouth was resumed. About a fortnight later severe hæmatemesis recurred and it was clear that the expectant treatment was not successful. Therefore Mr. ALLINGHAM did a posterior gastro-enterostomy and an uneventful recovery followed. Here it is clear that the continued passage of the acid gastric contents over the ulcer in the duodenum kept the ulceration from healing. This case confirms the conclusions of many surgeons that the best treatment for unperforated duodenal ulcers is gastro-enterostomy.

Gastro-enterostomy.

The value of gastro-enterostomy for many morbid conditions of the stomach is now fully recognised, though there may be still differences of opinion as to the details of the operation. Most surgeons are inclined to prefer the posterior operation but this preference is by no means universal. Mr. G. REINHARDT ANDERSON lays great stress on making the loop from the duodeno-jejunal angle as short as possible and to this he especially attributes the absence of regurgitant vomiting in his later cases. He considers also that it is wise to make the incision into the stomach oblique and as near as possible to the greater curvature. In his paper, to which we refer, he narrates many cases in which the value of this operation is shown. Mr. W. H. BROWN has published a case of bilious vomiting after gastro-enterostomy. The patient, a woman, 36 years old, underwent the operation for pyloric stenosis resulting from a cicatrised gastric ulcer. She went on well for four months when bilious vomiting occurred; it appeared every morning and amounted to about 12 ounces; otherwise she was in good health. As her condition was very distressing Mr. BROWN opened the abdomen and made a lateral anastomosis between the middle of the loop and the bowel below the junction with the stomach. The vomiting ceased and she has since done well.

Hour-glass Stomach.

Mr. A. W. MAYO ROBSON has published a paper containing notes of 23 cases in which he has operated for hour-glass stomach. The treatment depends chiefly on the exact form of the disease found. When the narrowing is in the centre of the stomach gastroplasty is a valuable method. If the contraction is not extreme Mr. MAYO ROBSON advises a posterior gastro-enterostomy. When the two cavities are equally dilated an anastomosis may be made between the two divisions by the operation known as gastro-gastrostomy but if active ulceration is present it will be well to perform a posterior gastro-enterostomy in addition.

Exclusion of the Colon.

Mr. W. ARBUTHNOT LANE has pointed out that chronic constipation, with overloading of the cæcum with fæcal matter, is liable to lead to a chronic inflammatory

peritonitis which results in the formation of adhesions which tend to prevent the efficient emptying of the cæcum Sometimes division of these bands is sufficient to relieve the pain and constipation resulting from them, but often the overloading of the cæcum and the ascending colon continues In cases such as these Mr LANE advises the making a free lateral anastomosis between the lower part of the ileum and the upper part of the rectum or sigmoid flexure The results of this operation have been very satisfactory The general health improves and daily motions are obtained with merely mild purgatives To prevent any fæces passing into the cæcum Mr LANE has modified the operation, dividing the ileum, closing its distal aperture, and making its proximal section open into the large bowel Mr C W MANSELL MOULLIN and Mr C G B KEMPE have performed similar operations for obstinate constipation resulting from adhesions and atony of the bowel

Carcinoma of the Duodenum

Mr G A SYME of Melbourne has published a case of carcinoma of the duodenum The rarity of the disease is great and this of itself would justify its publication, but it is especially noteworthy because Mr SYME resected the growth and the patient recovered The difficulty of removing a growth from the duodenum is very great The patient was a man, 40 years of age, and for two years he had suffered from abdominal pain after food with occasional vomiting The attacks of vomiting gradually increased in frequency until they occurred daily The stomach was dilated At the operation it was found that there was a hard mass in the third portion of the duodenum with infiltration of the adjacent glands The mass was excised and the cut edges were united The patient recovered rapidly and when seen two months later he could eat ordinary food The growth on examination was found to be a columnar carcinoma

Value of the Vermiform Appendix

The chief point of interest in connexion with the appendix which has come forward during the year is the statement of Sir WILLIAM MACEWEN that he is sure that the appendix is by no means the functionless developmental vestige which it is ordinarily considered to be but is an active functional organ Doubtless there are many reasons for this opinion but at present it must be said that his contention has not been proved Nevertheless, there is much in his argument that it is unwise to remove the appendix when it is not diseased It is certainly the custom of some surgeons to remove the appendix even though perfectly healthy, whenever the abdomen is opened for any cause Thus if it be necessary to perform a laparotomy for intussusception in a child some surgeons who look upon the organ as a worse than useless vestigial remnant will do an appendicectomy It is needful to bear in mind the fact that merely because we can assign no function to an organ we are not justified in saying that it has none and that therefore it is better removed It is not sufficient to say that patients from whom it has been removed do well without it The same argument would apply to the spleen Especially undesirable is the removal of a healthy appendix when the removal lengthens an operation appreciably, thus in laparotomy for intussusception in children the great danger is shock and even the few extra minutes required by the appendicectomy might suffice to turn the scale against the patient

Appendicitis

A valuable contribution on the subject of appendicitis was a clinical lecture by Sir WILLIAM H BENNETT, in which he showed that in many cases of acute appendicitis, especially in young people, there are often deceptive signs of improvement He narrated an interesting case where the abdominal pain decreased, the temperature fell, and the pulse lessened in frequency, so that to many observers the patient seemed manifestly better in every way and yet there were a perforation of the appendix and a fœtid abscess, this, with other cases, demonstrated the necessity of not trusting merely to the pulse and the temperature but of depending especially on the general condition of the patient He further stated that in the diagnosis between appendicitis and colic from indigestible food in boys the most valuable points of distinction are the short duration of the pain and the absence of after effects in colic, while in appendicitis the pain is much more lasting and tends to leave behind it a feeling of discomfort or stiffness in the right iliac region

Hernia of the Vermiform Appendix

It is well known now that the vermiform appendix is no uncommon inmate of a hernial sac Mr ARTHUR EVANS has recorded a case of a child in which the appendix was adherent in a hernial sac and simulated an encysted hydrocele of the cord Dr W P GOWLAND of Lincoln has described a case in which a somewhat similar condition existed A woman aged 56 years, had a swelling in the right groin of three weeks' duration There was no impulse on coughing As some clear fluid had been withdrawn by an exploring needle the swelling was thought to be a hydrocele of the canal of Nuck At the operation it was found that the appendix had become adherent to the peritoneal opening of a hernial sac, thus closing the sac and allowing the accumulation of fluid in it

Etiology of Hernia

The traditional theory of the origin of all forms of hernia, except the congenital variety, is that the hernial sac is produced by the protrusion of the abdominal viscus contained in the hernia Mr R HAMILTON RUSSELL of Melbourne some years ago maintained that all inguinal hernias are contained in sacs resulting from the persistence of portions of the processus vaginalis Mr RUSSELL has now advanced to the position that all forms of hernia are really congenital in origin—that is to say that the sac is always formed congenitally This opinion he supports by various examples of hernial pouches Further he thinks that the direction taken by these hernial pouches depends on the arterial branches in the neighbourhood and he explains this by suggesting that portions of the primitive pleuro peritoneal cavity become drawn away by the developing arteries The maintenance of this opinion will depend chiefly on the demonstration of the frequent existence of these peritoneal pouches in the young before any hernial protrusion of bowel or omentum has occurred The paper is of value and even if the position assumed by Mr RUSSELL cannot be fully maintained it is not improbable that the origin of some varieties may be thus explicable

Treatment of Hernia in Children

The opinion seems to be gaining ground that the hernias of children should be treated by operation at an earlier age than was formerly done and that the use of trusses is not advisable except for a short time in very young infants Mr E M CORNER in a post graduate lecture lays great stress on operating early in cases of hernia in children and he bases his opinion mainly on the fact that the natural growth of the tissues will assist in maintaining the cure Dr J CRAWFORD RENTON also advocates early operation in these cases Mr R W MURRAY claims that simple excision of the sac is all that is required in many cases in children but if the ring is large he performs an operation resembling that suited for older persons It is very interesting to see that Mr CORNER throws great doubt on the idea mentioned in all the text books that phimosis is a frequent cause of hernia in childhood Some correspondence took place on this point and support was given to both sides We should hesitate to say that a tight phimosis could never assist in the production of a hernia, but we feel sure that its role has been enormously magnified and therefore that the

widespread circumcision which is customary at the present time rests, so far as concerns the production of hernia, at least, on a very insecure foundation.

Separation of the Urine from the Two Kidneys.

Before a nephrectomy can be safely undertaken it is essential that the surgeon should be satisfied that the kidney to be left is healthy or at least capable of adequately carrying on the work of secretion of urine. If this precaution be neglected catastrophes cannot be avoided. Many methods have been devised for collecting separately the urines from the two kidneys. Most of these are exceedingly difficult of application and therefore can hardly be employed except by those who devote especial attention to the subject. One of the latest methods brought forward is that devised by Dr. GEORGES LUYS of the Lariboisière Hospital of Paris and it has been described in THE LANCET by Mr. R. A. BICKERSTETH. It consists of a metal and rubber screen attached to a double catheter, which can be placed in the lower part of the bladder so as to form two compartments, each of which receives the urine derived from one ureter and empties itself through one channel of the catheter; thus the urine from each kidney can be collected separately. The patient remains in a sitting posture while the urine is collecting, and this is essential, for otherwise the two urines would mix. In practice the instrument in skilled hands does its work well but some little acquaintance with the instrument and its mode of use is required to obtain the best results. It has already proved of immense service in doubtful renal cases and it is far more easy to use than any other method with which we are acquainted.

Rupture of the Bladder.

Mr. H. BETHAM ROBINSON has recorded an important case of intraperitoneal rupture of the bladder in a girl, aged five years. The child was knocked down and run over by a cart, the wheel passing over the abdomen. When seen two and a half hours later the lower part of the abdomen was rigid and tender. The flank contained fluid. The child was in great pain and was continually wishing to pass urine, but unsuccessfully. A catheter withdrew a small quantity of pure blood. The abdomen was opened and the bladder was found collapsed and on its upper surface was an oblique rent and the flanks contained some free urine. The wound in the bladder was closed with Lembert's sutures. The accident had also caused separation of the right os pubis at its epiphyseal lines. Except for some broncho-pneumonia recovery was rapid.

Treatment of Hypertrophy of the Prostate.

The treatment of hypertrophy of the prostate has changed greatly within recent years. The systematic use of the catheter and perineal drainage were the only alternatives from which the surgeon had to choose and it is difficult to say which was the better. Removal of one or both testes was much advocated a few years ago and some discussion arose as to the priority of its invention. In a few cases it is certain that some diminution in the size of the prostate occurred but the results were not uniform. For this reason and from the natural objection to castration the operation has fallen into partial disuse and it is certainly much less frequently performed at the present time. Vasectomy or division of the vas deferens and the other constituents of the spermatic cord had but a brief existence. It was more easy to obtain permission for the operation as the testis was left untouched but the effects on the prostate were even less certain than in the case of castration; probably the chief effect of the operation was on the vascular engorgement of the organ. Removal of the prostate either by the perineal or the suprapubic route has been practised for many years but it was customary to remove only the portion of the gland which seemed to be responsible for the obstruction to micturition. Occasionally an adenoma was shelled out from the enlarged gland but no systematic attempt was made to enucleate the whole tumour and the credit for discovering that it is possible in all, or nearly all, cases to do this must be given to Mr. P. J. FREYER. Discussions have arisen as to whether the mass thus shelled out contains the whole prostate or consists merely of a conglomeration of adenomata, while the true prostatic tissue is left behind as a thin layer. The discussion is merely of academic importance, however interesting, and though the evidence inclines towards the second view of the two mentioned, yet for all practical purposes the whole gland has been removed. The results are very encouraging. Even admitting into the fatal cases all those deaths which have obviously not depended on the operation the total mortality of Mr. FREYER'S cases does not amount to 10 per cent. At the time when Mr. FREYER'S paper appeared in THE LANCET he had performed 110 total enucleations and since then the number has been largely increased. The operation is by no means difficult when its *modus operandi* has been fully grasped and the completeness of the removal precludes any possibility of a recurrence of the difficulty in micturition, such as may, and does, occur after the other methods of dealing with this important lesion. We have also published several instances of this operation performed by other surgeons. Attempts were made at first to leave the prostatic urethra behind but this is unnecessary. For even when with great care the prostatic urethra has been left behind it has almost invariably sloughed away.

The Trendelenburg Position.

The Trendelenburg position is very frequently employed in operations on the lower portion of the abdomen and on the pelvis and its advantages are great but there are two objections to it which have been pointed out in THE LANCET. The first is that the pressure of the abdominal contents on the diaphragm may materially interfere with respiration and the other objection is that the pressure of the edge of the table on the nerves in the popliteal space may produce a paralysis. These effects are by no means frequently met with but they are of sufficient importance to make it advisable for the surgeon to take care to prevent their occurrence. Probably the best method of doing this is by not making the inclination of the table very great.

Oöphorectomy for Inoperable Carcinoma.

A few years ago the operation of oöphorectomy was recommended for inoperable cases of mammary carcinoma, whether primary or recurrent, and Mr. STANLEY BOYD showed that in about one-third of the cases the patients obtained more or less marked benefit, the benefit consisting in retrogression of the cancer and a period of a few months or years of good health. It is very desirable that we should have records of as many cases as possible in which this operation is performed, especially as oöphorectomy for inoperable mammary carcinoma is not often performed. Dr. G. E. HERMAN published in THE LANCET in 1898 a case of recurrent mammary cancer treated by oöphorectomy. The primary growth was removed in 1890. In 1896 it had recurred extensively, rendering impossible any operation for its removal. In March, 1897, both ovaries were removed and by September of the same year none of the recurrent growth could be felt. The patient remained in good health till 1901 but no certain recurrence was noticeable till in October, 1902, Dr. G. C. TAYLER discovered a painless swelling on the skull and she died in June, 1903, apparently from secondary growths but no necropsy was performed. A somewhat similar case was described by Mr. WALTER EDMUNDS. Dr. CLEMENT DUKES has published a case where not the slightest benefit resulted from the operation.

OBSTETRICS AND GYNÆCOLOGY

The Corpus Luteum

One of the subjects which has excited a good deal of interest during the past year is the function of the corpora lutea and the question as to whether they or the ovaries have an internal secretion or not The whole subject is admirably summed up by Dr H R ANDREWS in an article in the *Journal of Obstetrics and Gynæcology* for May 1904 FRAENKEL has carried out a research upon the subject and his deductions are as follows The corpus luteum is a gland which is renewed every four weeks in women during reproductive life and at varying intervals in the lower animals It controls the nutrition of the uterus in a cyclic fashion prevents it from relapsing into its infantile or its senile condition and prepares the endometrium for the reception of the ovum If the ovum be fertilised the corpus luteum continues to grow and to maintain the raised nutrition of the uterus during pregnancy If the ovum be not fertilised the corpus luteum merely produces the hyperæmia of menstruation and then degenerates There is, strictly speaking, only one corpus luteum, one real ovarian gland which regenerates itself periodically in slightly different situations and controls uterine life from puberty to the menopause Menstruation is caused by the secretory activity of the corpus luteum not by the pressure of the growing follicle on the ovarian nerves This secretory activity causes the four weekly hyperæmia which leads to pregnancy or menstruation Anomalous uterine bleeding and some cases of sterility may result from pathological conditions of the corpus luteum Lactation atrophy is a good example, during lactation there is as a rule, no ovulation and therefore no formation of corpora lutea These views receive some support from the number of cases in which pathological conditions of the corpus luteum and of the ovum have been found associated Numerous cases have been recorded of tumours of the ovaries occurring with hydatidiform moles and in many cases of chorion epithelioma the ovaries have been found to contain cysts of the corpus luteum In some cases it has been found that not only the corpora lutea had undergone cystic degeneration but even unruptured Graafian follicles had become cystic or had formed cysts of the corpus luteum In other cases widespread dissemination of lutein cells is found all over the ovary The theory put forward is that the corpus luteum presides over the activity of the trophoblast and that the over production of lutein tissue is the cause of excessive chorion epithelial action in the ovary or tubes and the conversion of the ovum into a hydatidiform mole A most interesting case has been recorded by BIRNBAUM in which a patient was delivered of a fœtus and a vesicular mole and the left ovary contained two corpora lutea, one normal and the other abnormal with irregular extension of the lutein cells into the ovarian stroma

The Diminishing Birth rate

In his presidential address to the British Gynæcological Society Professor J W TAYLOR discussed the important question of the falling birth rate in this country He came to the conclusion that this was due mainly to the *adoption* of means for the prevention of pregnancy and uttered a warning as to the outcome for England if no check was found for this only too prevalent abuse of so called modern civilisation He pointed out the disastrous results which these practices are producing in the case of the French people "Artificial prevention is an evil and a disgrace—the immorality of it the degradation of succeeding generations by it their domination or subjection by strangers who are stronger because they have not given way to it, the curses which must inevitably follow the parents of decadence who started it—all of this needs to be brought home to the minds of those who have thoughtlessly or ignorantly accepted it For it is undoubtedly to this that we must attribute not only the diminishing birth rate but the diminishing value of our population

Puerperal Mortality

The Milroy lectures for the year were delivered by Dr W WILLIAMS who took for his subject Deaths in Childbed a Preventable Mortality The lectures, which were largely based upon the author's own observations in the county of Glamorganshire, showed conclusively that the death rate from both the accidents of childbirth and puerperal fever is very high indeed in the densely populated mining districts of this Welsh county In an endeavour to find some explanation of these facts the lecturer was forced to come to the conclusion that midwives played a large part in the causation of the sustained mortality rate from sepsis and the accidents of childbirth If this conclusion be the correct one, then the obvious remedy is to improve the training of the midwife and it is to be hoped that the new Midwives Act will go far to effect this purpose But in this, as in most matters of the kind the want of funds is likely to interfere to a very large extent with the proper working of the Act Who is to provide the money? In the future no doubt the county councils will take up the question of the necessary provision of the training Dr WILLIAMS suggests that a national council should be formed for the purpose of undertaking the proper distribution of midwives throughout the country districts and of collecting funds It would also help to found training scholarships, to give grants to districts too poor to support a midwife and to start a national training hospital for midwives The facts and figures quoted by Dr WILLIAMS are of the utmost importance to all who are interested in this question

Live Birth

A most interesting problem, and one which medical men are often confronted with, is the question as to what constitutes live birth *The Central Midwives Board* has laid it down that a child is deemed to be stillborn when it has not breathed or shown any sign of life after being completely born Dr S B ATKINSON during the past year published a pamphlet entitled Life Birth and Live Birth in which he discusses this question exhaustively The most difficult problem is to fix some line in the process of parturition the crossing of which must be accomplished before the new human being can be said to have entered the world It will be seen from the cases cited by Dr ATKINSON that judges do not always agree that complete birth is necessary in order to constitute a living child complete birth implying that the child is entirely external to the mother but not that the placenta has come away or that the cord has been tied Happily the fact is not known commonly that the killing of the child while still within the mother's body would not be held as murder in the generally accepted view of the law Judges have however, not failed to express disapproval of such a theory of separate existence It is homicide in Germany to kill a living fœtus which is at all apparent at the vulva In this country there may be a stage in the existence of the fœtus during which it may have really a physiologically separate existence although not a legal one, and during *this stage it is not* "a reasonable creature in being and under the KING'S peace, and therefore cannot be technically the subject of murder

Cæsarean Section

Amongst the more interesting cases recorded in THE LANCET during the past year is one of Cæsarean section for that very rare disease myasthenia gravis The patient's condition towards the end of her pregnancy was such that physical exertion of the slightest kind produced great exhaustion and the most alarming dyspnœa The dyspnœic symptoms increased in gravity and at last it was found that the only respiratory movements were those associated with hiccough Cæsarean section was decided

upon and carried out by Dr. J. E. GEMMELL and was followed by complete recovery and gradual improvement in the respiratory symptoms. Another interesting case of Cæsarean section was recorded by Dr. R. P. RANKEN LYLE of a patient with a double uterus and vagina in whom one half of the uterus contained a fibroid tumour obstructing labour. The vagina was completely divided into two halves by a median septum. The myomatous portion was removed by supravaginal amputation and the patient made a good recovery.

Dr. J. M. MUNRO KERR read a paper before the Obstetrical Society of London on Certain Details regarding the Operation of Cæsarean Section in Cases of Contracted Pelves, based upon a series of 30 cases. The author's mortality was 6·6 per cent. and his morbidity, as based upon a temperature of 100·5° F., 26 per cent. From a study of his own statistics and those of others he comes to the conclusion that the best results are obtained by the method of dealing with the uterus by the operation of supravaginal hysterectomy and that in the case "of patients who come under one's care before labour the conservative operation is indicated in a large number of cases."

Cancer complicating Pregnancy.

In a paper read at the November meeting of the same society Dr. HERBERT R. SPENCER gave an account of three cases of cancer of the cervix complicating labour in advanced pregnancy which were delivered through the natural passages and treated by high amputation of the cervix during the puerperium or (in one case) five months after delivery. The patients remained well and free from recurrence 11, eight and a half, and eight years after the high amputation. The children were born alive and one survived; one of the patients had since been delivered by Cæsarean section of a child who also survived. In the treatment of these cases he thought: 1. Great care should be taken by the use of antiseptic solutions, uncontaminated instruments, and the cautery to prevent local implantation of cancer cells. 2. In operable cases delivery should be effected *per vias naturales* when practicable, followed during the puerperium by the high amputation of the cervix with the galvano-cautery and in certain cases by the removal of the body immediately afterwards. 3. In operable cases in which the cervix would not dilate Dr. SPENCER suggests (*a*) the removal of the cervix with the galvano-cautery, followed by the delivery of the child and the removal of the body either by the vagina or by the abdomen, as being probably preferable to (*b*) the removal of the child by Cæsarean section and of the uterus by the vagina (OLSHAUSEN), and (*c*) the removal of the child and body by the abdomen and of the cervix by the vagina (FEHLING). 4. For operable cases in which the cancer had extended outside the cervix cauterisation of the growth followed by abdominal hysterectomy. 5. For cases too far advanced for radical operation Porro's operation with the use of the serre-nœud.

Accidental Hæmorrhage.

At the meeting of the British Medical Association at Oxford a discussion on the treatment of accidental hæmorrhage was opened by Sir ARTHUR V. MACAN who in a very extensive review of the subject expressed himself as favourable on the whole to the method of treating the majority of these cases by plugging the vagina; a few cases, however, were best treated by rupture of the membranes or Cæsarean section. Most of the speakers who took part in the discussion were in favour of the treatment by plugging the vagina and were not in favour of most of the methods of accouchement forcé which at one time were extensively advocated in the treatment of this complication of labour.

Operative Treatment of Cancer of the Uterus.

At the same meeting a very important communication was read by Professor OLSHAUSEN of Berlin on the Removal of the Uterus for Cancer, more especially as regarded the merits of vaginal compared with abdominal hysterectomy. He quoted statistics from his own extensive experience and from that of others showing that vaginal hysterectomy was the safer and the more easy method and one which gave from the point of view of thoroughness all that could be expected as regarded the extirpation of the disease. He dealt at length with the difficulties of the procedure advocated by those recommending the abdominal route, especially as regards the removal of glands and connective tissue around the uterus. He discussed the conditions of the pelvic glands and tissues and particularly noted the difficulty of dealing with tissues other than glands. He also showed from statistics that the abdominal operation, at any rate on the continent (Germany and Austria), had a higher mortality than the vaginal operation. He therefore strongly advocated the vaginal operation whenever possible.

The Value of Exploratory Operations in Suspected Malignant Disease of the Ovaries.

In the Ingleby lecture for the year Dr. C. J. CULLINGWORTH drew attention to the value of exploratory operations in apparently hopeless cases of malignant disease of the ovary and brought forward some most striking cases in which such operations have been followed by very good results both immediate and remote. It is notoriously difficult to say with certainty what is the exact degree of malignancy of any ovarian tumour, more especially if it be one containing intracystic growths. Dr. CULLINGWORTH's results show that we need not despair even in the apparently most hopeless cases and that operations in such instances are often surprisingly successful.

Primary Hydatid Disease of the Fallopian Tube.

The occurrence of hydatid disease in this country is always interesting and a remarkable case of primary hydatid (echinococcus) disease of the Fallopian tube has been recorded by Dr. T. W. EDEN during the past year. The patient was a woman, 40 years of age, who had been married for 13 years, had never been pregnant, and presented herself at the Chelsea Hospital for Women in July, 1903, complaining of pain in the back and left side. On examination a small pelvic tumour was found in the pouch of Douglas which from its position and characters was thought to be a dermoid cyst of the right ovary. Operation was performed on Sept. 10th, when the tumour was found to be the distended and densely adherent right Fallopian tube filled with detached hydatid vesicles. The ovary was quite separate and unaffected except by adhesions. The tube and ovary of the left side were adherent but otherwise unaffected. There was no trace of hydatid disease elsewhere. The patient made a good recovery. Dr. EDEN believed that only one other case of primary hydatid disease of the Fallopian tube was on record—namely, the one described by DOLERIS in 1896. With regard to the ovary, he believed that only one case of primary hydatid disease of that organ had been recorded—namely, the one described by PÉAN in 1895.

OPHTHALMOLOGY.

The chief event in the department of ophthalmology has been that the international congress on this subject met at Lucerne in the month of September under the presidency of Dr. M. DUFOUR. An interim report has recently been published containing the papers presented on the subject of discussion proposed by the organising committee of the congress, which was to estimate the value of an injured eye. Replies of great length and importance were received from Dr. A. SULZER of Paris, Dr. T. AXENFELD of Freiburg in Bavaria, and Dr. W. V. WURDEMANN of Milwaukee, Wisconsin, U.S.A. The ophthalmological section of the British Medical Association met at Oxford in July under the presidency of Mr. R. W. DOYNE who had obtained the

consent of the master and wardens of Keble College to lodge and to offer hospitality to many of the members in their noble dwelling, a privilege that was fully appreciated and gratefully acknowledged The Bowman lecture was delivered before the Ophthalmological Society in November by Dr F W MOTT who took for his subject the Progressive Evolution of the Visual Cortex in Mammalia The Arris and Gale lectures were given by Mr J HERBERT PARSONS in the theatre of the Royal College of Surgeons of England and were concerned with the consideration of the Neurology of Vision From both of these as well as from the researches of Professor J N LANGLEY, Professor R S WOODWORTH, Professor C S SHERRINGTON, Professor H K ANDERSON, and others it is evident that the cell groups, centres, or nuclei which have become developed by a process of evolution in the cerebro spinal and sympathetic nervous systems are being gradually localised by the various methods of experiment anatomical research, and histological and pathological investigation, though it must be acknowledged that much still remains to be done

Diseases of the Conjunctiva

The bacteriology of the conjunctiva has been investigated by many microscopists, amongst whom Dr INGLIS POLLOCK and Dr J EVANS may be specially mentioned Their examinations of the muco purulent discharge common in many forms of conjunctivitis have shown the presence of the Koch Weeks bacillus to be of common occurrence, whilst less frequently the Morax Axenfeld bacillus, the pneumococcus of Frankel, the gonococcus the streptococcus, and the staphylococcus pyogenes aureus have been found By persevering in such researches a purely bacteriological classification of the numerous varieties of disease now loosely included under the term 'conjunctivitis will become practicable, which again will certainly lead to more prompt and effective treatment The precise bacillus with which trachoma, one of the most important diseases of the conjunctiva, is associated still remains uncertain ARNOLD KNAPP from an examination of the secretion in 120 cases found like L MÜLLER, in many instances a small and short bacillus closely resembling that of influenza yet a close investigation of the contents of the follicles which constitute a characteristic feature of the disease only enabled him to detect its presence in four specimens Dr BOLDT in his recent treatise on trachoma frankly acknowledges that all efforts to discover the germ of that disease have as yet proved fruitless This is the more remarkable since abundant opportunities of studying it are presented both in this country and on the continent It was prevalent amongst the Greeks and the Romans, according to Dr FURLAN and it occurs very generally wherever hygienic conditions are faulty It is conveyed by contact, its results are most serious and except in the earlier stages it is not very amenable to treatment of any kind It is right that the attention of the public should be directed to this disease, since it is one of national importance in view of the large alien immigration into this country from districts known to be infected its insidious mode of attack, and the certainty with which it spreads when once introduced in schools, barracks, orphanages and asylums So terrible are its effects in Eastern Europe and in Egypt, where it is endemic and probably propagated by flies that the Hungarian Minister of the Interior has offered a prize of 2000 kronen for the best essay upon it and has appointed a special surgeon, Dr EMIL VON GROSS, to superintend all matters pertaining to the disease, to issue instructions to prevent its spread, and to make it penal to fail to report its occurrence With the same object in view an ophthalmic hospital was established a few years ago by the Order of St John of Jerusalem in England at Cairo where immense numbers of in and out patients are annually treated The KING and the QUEEN with their usual benevolence attended last winter an entertainment for the maintenance of this institution Sir ERNEST CASSEL'S peripatetic dispensary in Egypt, the object of which is to bring skilled assistance to the poor labouring under this affliction and to which he contributed £40 000, is also doing good work It may be observed that Mr N BISHOP HARMAN, from the observation of numerous healthy children, has found well marked lymphatic nodules in a considerable number, especially at the age of ten or 12 years

Diseases of the Cornea and the Sclerotic

Dr A DE LIETO VOLLARO and the Japanese histologist Dr TAKAYASU confirm the statement made long ago by Mr E CANTON that the arcus senilis is due to a fatty deposit in the layers of the cornea, but this has been impugned by Professor G FUCHS A considerable number of forms of keratitis have been differentiated Dr J M BAIL in his recently published treatise on ophthalmology, enumerates no less than fifteen Amongst these is one to which he has applied the term aspergillus keratitis, due to the growth of the spores of the aspergillus fumigatus These spores unlike those of many other fungi, were found by Professor F LEBER to be able to live at the temperature of the body and when lodged on a corneal lesion to thrust the threads of their mycelium through the layers of the cornea from without inwards and gaining access to the interior of the eye to destroy it Other interesting forms are the dendritic, filamentary, calcareous, striped and grill like keratitis each having its characteristic features A good account of keratitis profunda derived from the study of 54 cases was given at the Oxford meeting of the British Medical Association by Mr W F HOLMES SPICER who regarded it as a result of malnutrition and deprecated operative measures The employment of subconjunctival injections in various diseases of the sclerotic and the cornea seems to be extending solutions of perchloride and cyanide of mercury salicylate of sodium dionin adrenalin and tuberculin having been employed Dr L WEBSTER FOX especially recommends solutions of sodium saccharinate containing from five to 15 grains to the ounce, to be injected subconjunctivally twice weekly for three weeks in all forms of keratitis in cases of nebula of the cornea and in cases of vitreous opacity following any form of vitreous retinal or choroidal disease

Cataract

An attempt has been made by Mr J CRILLI to explain the occurrence of senile cataract by associating it with chronic interstitial nephritis In this form of renal disease there are insufficiency and low specific gravity of the urine and consequent retention of the solids in the system The hypertonia of the lymphatic fluids by which the lens is nourished interferes with its osmotic relations and cataract results The histology of cataract has been investigated by Dr SANTUCCI of Turin who finds that in the early stages the lenticular fibres are not affected but as it advances there appear very fine granulations between the fibres Then vacuoles are seen to be due to the coalescence of the granules and the breaking down of the fibres and finally crystals of cholesterin and of calcium oxalate are to be found At the Oxford meeting of the British Medical Association Mr M M MCHARDY advocated his method of artificially maturing immature senile cataract, which consists essentially of in indectomy, allowing the escape of the aqueous humour, followed by firm pressure with a spatula or spoon of the collapsed cornea against the lens and removal of the softened lens after the lapse of some days In his hands the method has proved very successful Other operators have proved its value, some with success whilst others after trying it have discontinued its use Signor MENDES DI LEON and Dr L BACH

have called attention to the saliva of the surgeon as a source of infection in cataract. They make the sensible suggestion that a cotton-wool respirator should be worn during the operation.

Myopia.

The operative treatment of high myopia by the removal of the lens has been the subject of several essays and communications to journals. Many surgeons hesitate in its performance lest the patient, already heavily handicapped in the race of life, may through failure of the operation be altogether incapacitated from earning his own livelihood, especially since it is thought that the pathological conditions of the eye commonly associated with high myopia militate against success, however expert may be the hands that undertake the operation. The statistics that have been published prove that these fears are groundless. Those adduced by so experienced a surgeon as Mr. W. ADAMS FROST showing the results that he obtained in 38 cases demonstrate that it may be undertaken with fair prospect of success, providing that the patient is young, that the eye is free from other disqualifying conditions, that his vision is moderately good considering the amount of myopia, and that this amount should not be less than −12 D. He thinks that if the vision be materially improved after the operation, enabling the patient to dispense with the use of a lens, he should be content and that the other eye should on various accounts not be operated on. M. LAGRANGE, Professor J. HIRSCHBERG, Dr. ARTHUR H. BENSON, and lastly, Mr. SIMEON SNELL, who has operated on 60 cases, all find that vision is measurably improved and that consequently the operation is quite legitimate. Nevertheless, glaucoma, suppuration of the globe, detachment of the retina, and other objectionable results have been observed to follow the extraction, so that Professor HIRSCHBERG'S remark that the cases require careful selection should not be neglected.

Accommodation.

The theory of accommodation advanced by HELMHOLTZ has been the subject of discussion. His view, long generally accepted, was to the effect that in contraction the ciliary muscle draws forward and relaxes the choroid and suspensory ligament and thus allows the elasticity of the lens to come into play and the lens to become more convex. A different explanation was advanced by MANNHARDT, SCHOEN, and TSCHERNING who contended that the increased curvature of the lens during accommodation is produced by tension instead of relaxation of the zonula effected by the contraction of the ciliary muscle. The subject was again taken up last year by Dr. K. A. GROSSMANN who was able to make exceptionally good observations on a patient with aniridia who had at the same time anterior and posterior polar cataracts in both lenses, thus enabling changes in the size and position of the Purkinje-Sanson's images in accommodation to be followed with great precision. He found that skiascopic examination showed changes in the surface of the lens from its spherical form into a lenticonus—that is, flattened towards the periphery and bulging forwards at the centre, when examined before and during accommodation. There were also trembling or oscillation of the lens, protrusion forward of the ciliary processes, diminution of the equatorial diameter, increase in the axial diameter, and approximation of the anterior surface of the lens to the cornea without movement of the lens as a whole, the posterior surface of the lens becoming centrally more convex, but, like the anterior, flattened peripherally. In the *Journal of Physiology* for this year Professor ANDERSON STUART of Sydney, in discussing the changes occurring in accommodation, describes fibres forming a firm union between the suspensory ligament and the vitreous in the ciliary region. Some of these fibres extend over, and into, the circular ciliary muscle and the ciliary processes. Others penetrate the vitreous; the ciliary portion is virtually the tendon of the ciliary muscle and permits movement of the parts; the vitreous portion, playing the part of a ligament, limits movement. Anteriorly the two sets of fibres unite in the suspensory ligament. Further, Professor STUART endeavours to explain the use of the hyaloid canal, which he thinks would disappear were it not in some way useful, by showing that when the ciliary muscle contracts the anterior and central portion of the vitreous is compressed and hence the lymph in the canal of Stilling, or hyaloid canal, is squeezed towards, and into, the posterior part; when, on the other hand, the ciliary fibres are rendered tense by the recoil of the choroid the lens is flattened, the capsular portion of the suspensory ligament is pulled backwards, and the vitreous part is slackened; the ciliary zone of the vitreous now recedes outwards and backwards, thus relatively dilating the anterior part of the canal and filling it with lymph and compressing and emptying the posterior part. The function of the hyaloid canal is therefore to provide an adjustable reservoir which may be easily and rapidly displaced backwards in positive accommodation and forwards in negative accommodation.

Glaucoma.

The subject of glaucoma has received much attention, partly owing to the very serious nature of the disease which so often leads to blindness and partly to the obscurity which still surrounds its nature, varieties, causes, and treatment. Its characteristic feature is increased intra-ocular pressure which is generally attributed to disturbance of the balance between the transudation into, and elimination from, the anterior chamber of nutrient fluid, the latter, as Mr. G. A. BERRY remarked in his address on Glaucoma delivered at Oxford in July, being the chief condition present. But the question naturally arises, to what is the defective elimination due? and various answers have been returned, some regarding it as a consequence of blocking of the filtration angle between the cornea and the iris either from exudation or from adhesions, whilst others contend it proceeds from the pressure of an enlarged lens or from altered osmotic pressure as maintained by Dr. PUSEY BROWN. It presents many varieties, being sometimes very slow in its progress, painless, and unattended by inflammatory symptoms, in others leading the eye to swift destruction with violent inflammatory symptoms and with the intense pain that accompanies inflammation of organs like the testes, ovary, and eye which have a dense fibrous investment. In regard to diagnosis neither increased tension of the globe nor cupping of the optic disc appears to be pathognomonic, but Mr. BERRY has satisfied himself that Bjerrum's screen may be relied on. In this test a small white object, three millimetres square, looked at from a distance of two metres, gives evidence in all glaucomatous cases of a defective area which invariably extends to the blind spot or entrance of the optic nerve, though in other directions the limits of the field are normal. This is a novel, an important, and an easily applied test. That the increase of intra-ocular pressure in glaucoma is only partially due to local conditions is shown by the experiments of Mr. E. HENDERSON and Dr. E. H. STARLING who found by an ingeniously constructed manometer that the intra-ocular pressure is a function of the blood pressure. In regard to treatment M. GRANDCLÉMENT believes that the majority of cases can be arrested in the early stages by the instillation of a solution of adrenalin and cocaine every hour for three days consecutively, the treatment being stopped as soon as normal tension is regained. The different and complex forms presented by glaucoma render it extremely difficult to judge of the advantages and propriety of operative treatment, and though all are agreed upon the advisability of active interference in acute inflammatory cases many are content to try for some time, at all events, the effect of myotics in the subacute and chronic cases. Dr.

WILLIAM WILDER of Chicago, Dr. J. M. BALL of St. Louis, Dr. G. WYGODSKI of St. Petersburg, and others have published valuable articles on glaucoma. Dr. WYGODSKI gives the condition of no less than 314 cases of iridectomy two years after the operation. The statistics which he adduces show that the operation is of permanent benefit in the acute cases, much less advantageous in chronic and subacute cases, and of scarcely any use in glaucoma simplex. Dr. WILDER'S and Dr. BALL'S communications deal with the serious operation of sympatheticectomy or resection of the superior cervical sympathetic ganglion in glaucoma. The operation has been done more frequently than might be supposed. Dr. WILDER has collected records of 68 operations performed on 54 patients, whilst Dr. ROHMER has accumulated records of 114 operations on 94 patients. The operation is said to present no remarkable difficulty and to be almost unattended by danger to life. But the resection has been followed, in addition to reduction of ocular tension and relief of pain, by various more or less serious symptoms, such as persistent neuralgia, hyperæsthesia, or anæsthesia of the same side as that operated on, ptosis, lacrymation and conjunctival congestion, hoarseness of voice, aphonia, or dysphonia from injury to the recurrent laryngeal nerve, lasting for a variable period from a few months to a year or more. It is claimed for the operation that it is very serviceable in glaucoma simplex. Sufficient credit has not been given to the effects of the operation suggested and practised by Mr. H. HANCOCK in acute cases. That operation is an easy one; it instantly relieves pain and reduces tension, it is persistent in its effects, it does not spoil the circular contour of the pupil and, if unsuccessful, it is not followed by any other ill effects.

Retro-ocular Neuritis.

At the Oxford meeting of the British Medical Association Mr. R. MARCUS GUNN made an intelligent effort from a study of 350 cases to reduce to some kind of order the diverse affections that have been included under the common head of retro-ocular or retro-bulbar neuritis. The term is an inappropriate one, since it is applied to many conditions produced by many different causes. The primary trouble, as pointed out by Dr. UHTHOFF, is probably an interstitial neuritis which expresses itself by failure of vision chiefly affecting the macular region without any well-marked changes in the disc visible with the ophthalmoscope but with impaired pupil reaction and pain in moving the eye. At a later period the disc becomes pale or white. Syphilis, tuberculosis, gout, rheumatism, influenza, and exposure to cold are responsible for its occurrence in many cases and it is fortunate that the disease has a tendency to recovery.

Injuries of the Eye.

Injuries of the eye owing to the multiplication of machinery have become of frequent occurrence and the value of one eye has of late been the subject o several treatises and communications to journals and of papers read before congresses. Dr. SULZER brought the subject to the consideration of the international Congress that met at Lucerne. Dr. AXENFELD and Dr. WÜRDEMANN have also discussed it at considerable length. There is little difference of opinion where both eyes are lost; all insurance offices regard it as equivalent to complete loss of gaining a livelihood and pay the full indemnity, but where only one eye is injured many points enter into consideration, as prospect of recovery, nature of occupation, extent to which partial loss interferes with wage-earning capacity, and practicability of obtaining other remunerative occupations; and finally on the greater or less necessity for the use of both eyes in the particular avocation of the claimant. Hence there is much variation in the awards given in particular cases, awards that vary from 12·5 to 33 per cent. of the wage-earning powers for a year. The award ought really to depend on the degree of failure of vision in relation to the occupation of the patient and the wages which he has been earning.

Sympathetic Ophthalmia.

The opinion is gaining ground that sympathetic ophthalmia is not a correct expression, that it is not due to sympathy or to any reflex action. As Mr. H. PERCY DUNN has suggested, the term "infective cyclitis" should be substituted for it. He emphasises the fact that in the majority of cases the disease commences when the ciliary region of an eye has been injured and that it is caused by a specific micro-organism. Admitting this, two explanations have been advanced. Professor A. MAITLAND RAMSAY contends that the micro-organism itself travels from the injured or "exciter" eye to the secondarily affected eye or "sympathiser" in all instances except when sarcoma of the choroid or dislocation of the lens accompanied by plastic cyclitis is the cause of the disease. Mr. DUNN, on the other hand, considers that the micro-organism creates a toxin which is conveyed by continuity of tissue presumably by the lymph channels to the ciliary region of the healthy eye, in which by its irritating presence it causes a severe form of irido-cyclitis. He is unable to draw a line of demarcation between the so-called sympathetic irritation and sympathetic ophthalmia, believing that the former is of infective origin and due to intermittent and small doses of toxin insufficient to cause a full outbreak of the disease but yet sufficient to excite modified symptoms. Whichever of the two hypotheses—for they can only be regarded as hypotheses—may prove to be correct, the rules that should guide the surgeon are well laid down by Professor RAMSAY and are, briefly, enucleation of the injured eye when vision is lost and when it contains a foreign body; but enucleation is not to be performed when there is still vision in the injured eye, especially if sympathetic ophthalmia be in progress.

Relation of Ophthalmic to General Disease.

Whilst the etiological connexion between caries of the teeth and ophthalmic disease has been generally recognised little attention has been paid to the sphenoidal sinuses and posterior ethmoidal cells, and although it does not appear that neuritis and pressure atrophy proceed from tumours in these regions, yet such symptoms have been recorded as following suppuration of these cavities. Professor ONODI of Budapest has adduced good evidence that careful examination of these parts should not be neglected. The employment of massage of the eye for the treatment of errors of refraction, recommended by Dr. DONEC of Dijon and approved by Professor DARIER, is, according to Dr. E. E. MADDOX, of only temporary benefit. Many treatises, lectures, and addresses have been published showing the great importance of attending to, and correcting, errors of refraction. These conditions are only slowly becoming recognised as true causes of many common complaints, such as headache and muscular spasms, which are irremediable by medicine but are promptly relieved by the use of appropriate glasses. Without going so far as Dr. G. M. GOULD in attributing most of the troubles of DE QUINCEY, CARLYLE, DARWIN, HUXLEY, and BROWNING to errors of refraction it may be conceded that the employment of glasses would have made life easier to some of them.

Blastomycosis.

Really new diseases are of rare occurrence but about ten years ago Dr. T. C. GILCHRIST described a distinct skin disease due to a yeast-like fungus. He named the affection, which occurred on the back of a man's hand, blastomycetic dermatitis. Since that time about 35 cases have been recorded, nearly all of which occurred in Chicago. Dr. CAREY A. WOOD has described a case occurring under his care in which the fungus attacked the lower eyelid, formed a stye-like growth with a scab which, on removal, left a raw

discharging sore. Under the microscope there were found great epithelial proliferation with certain yeast-like double-contoured organisms. Iodide of potassium and the Roentgen rays seem to be useful in treatment.

New Remedies.

Amongst new remedies may be mentioned bromide of methyl-atropine, a good mydriatic which has only a brief action on accommodation; eumydrin, also a mydriatic; and stovaine, a new local anæsthetic obtained from the group of amino-alcohols by M. FOURNEAU.

The Ophthalmological Society and Prescribing Opticians.

The encroachment of opticians upon the domain of pure medicine by including sight-testing in the examination for their diploma has called forth a vigorous protest from the Ophthalmological Society of the United Kingdom. Errors of refraction, it is pointed out, are often associated with other conditions of the eye or of the system in which the employment of lenses is of quite subsidiary importance. Cataract, glaucoma, disease of the retina, hæmorrhages, atrophy of the optic nerve, and many other conditions may be present, the knowledge of which at an early period would be of great value in directing treatment, yet are certain to be overlooked by those whose education is professedly inadequate to enable them to understand their import. It is, moreover, as the Ophthalmological Society maintains, undesirable and dangerous to encourage the public in the belief that affections of any organ of the body can be safely treated by those who are unacquainted with its anatomy and physiology and with the various morbid conditions to which it is liable.

Literature.

The more important works that have been published are:—J. M. BALL, "Modern Ophthalmology"; J. HERBERT PARSONS, "The Pathology of the Eye"; EDWARD E. GIBBONS, "The Eye, its Refraction and Diseases"; HOWARD HANSELL and W. M. SWEET, "Text-book of the Diseases of the Eye"; L. WEBSTER FOX, "Diseases of the Eye"; Sir W. H. GOWERS, "A Manual and Atlas of Medical Ophthalmology," fourth edition; W. N. SUTER, "The Refraction and Motility of the Eye"; H. GRIMSDALE, "Errors of Refraction"; G. A. BERRY, "Manual of Practical Ophthalmology"; G. HARTRIDGE, "The Refraction of the Eye," twelfth edition; G. O. HAAB, "Atlas der Augenoperationen," "Atlas der Ophthalmoscopie," and "Atlas of External Diseases of the Eye"; ST. JOHN ROOSA and A. DAVIS, "Handbook of the Anatomy and Diseases of the Eye and Ear"; S. BAUDRY, "Traumatismes de l'Œil," third edition; and BOLDT, "Trachoma."

Obituary.

The obituary for the year includes, amongst others, the names of Count JOHN MAGAWLY of St. Petersburg, HYGINO DE SOUSA of Lisbon, Professor GAYET of Lyons, Dr. EMIL MAIRN of Karlsruhe, Dr. CARL GENTH, Dr. F. HEISRATH of Königsberg, Dr. SOUS of Bordeaux, and Dr. W. A. MCKEOWN of Belfast.

FORENSIC MEDICINE.

Personal Identification.

During the present year two cases bearing on the question of personal identification have aroused considerable interest. That relating to Mr. ADOLPH BECK, who was twice convicted at the Central Criminal Court and once served a long term of penal servitude, stands forth as a striking instance of miscarriage of justice. There was false identification in almost every particular. Reviewing all the evidence as regards the physiognomy of Mr. BECK and the man SMITH, for whom he was mistaken, it is difficult to understand how they could have been considered one and the same man except for the fact that Mr. BECK was not well known to the persons professing to identify him, for Mr. BECK was of fresh complexion and had blue eyes whilst SMITH was darker, sallow-faced, and had brown eyes. The marks on the body of each were in the main distinctive and one in particular was absolutely characteristic. Nothing short of gross negligence and blundering obtained at every stage of observation. The case of DONOVAN and WADE, who were recently convicted, sentenced, and executed for the murder of an old lady in the East of London, differed materially from the foregoing in that the identification was by individuals who had known them by sight for considerable periods. That both criminals were in, and near, the house of their victim at or about the time of the tragedy was amply proved. Nevertheless, it is doubtful if a conviction would have been obtained had there been reasonably trustworthy testimony to support the plea of an alibi. The amended criminal law allows a person indicted for murder to give evidence on oath on his own behalf. Neither DONOVAN nor WADE dared to face the ordeal of cross-examination. The refusal of a prisoner to go into the witness-box must not be directly commented on to his disadvantage; at the same time the fact is bound materially to influence the minds of the jurymen who have to pronounce him innocent or guilty. In a recent leading article we took occasion to suggest methods by means of which the risks of mistaken identity would, in our opinion, be considerably reduced.

Remarkable Trials for Murder.

A trial for murder, recalling in many of its features the DOUGAL case, was recently held in Ireland. A man named FEE was charged with having killed another and burying his body in a manure heap where it lay undiscovered for many months. In spite of advanced decomposition the tissues in some measure had been preserved by lime so that it was possible to observe a vertical cut in the throat similar to that inflicted by pig killers. FEE'S occupation had given him considerable practice in this method of despatching animals. The case is remarkable in that on two occasions the jury disagreed, while so convinced were the prosecuting authorities of the guilt of the accused that they refused to enter a *nolle prosequi*. At the third trial a conviction was obtained. The death penalty was carried into execution.

An extraordinary case was tried at the Durham assizes before Mr. Justice GRANTHAM on July 16th. A pitman named BREEZE, aged 21 years, had lodged with another pitman and his wife named CHISHOLM. He appears to have become enamoured of the woman who told him that her husband was jealous and added, "I wish I was dead." The prisoner replied, "Shall I kill you?" and immediately strangled her. He gave himself into custody. At the trial he protested his guilt and said that he would like to put the rope round his own neck. Previously to the tragedy BREEZE had borne a good character. He was an energetic football player, a non-smoker, and a teetotaler, antecedents strangely at variance with those commonly associated with the commission of deadly crime. Medical evidence was called to prove that he was fit to plead and having pleaded guilty he was as a matter of course condemned. The case was evidently on the borderland of impulsive insanity and gross moral depravity. It was one in which medical testimony as to the state of the prisoner's mind at the time he murdered his victim, could not be invoked but it seriously raises the question whether the law relating to criminal responsibility should not be more comprehensive and the pleadings in defence allowed to be more elastic.

Actions by, or against, Medical Men.

At the recent Swansea assizes Dr. A. D. GRIFFITHS of Bridgend brought an action for damages for assault and slander and recovered £500 against a man named FAITHFUL.

In 1903 FAITHFUL'S wife consulted Dr GRIFFITHS for some uterine trouble An examination was made but no third person was present although Dr GRIFFITHS desired it In September, 1904, Mrs. FAITHFUL again sought advice and Dr GRIFFITHS had just commenced an examination when the husband rushed in and assaulted him and accused him of misconduct At the trial neither the defendant nor his wife put in an appearance Their failure to do so was convincing proof that the slanderous charge was utterly untrue and was in all probability made for the purpose of blackmail Thus Dr GRIFFITHS'S high professional and social integrity was emphatically confirmed His case has called forth universal sympathy from the public and medical men alike

At the Central Criminal Court Dr F J HICKS was indicted for having procured abortion upon a married woman who consulted him at his house A stem pessary was introduced into the uterus and a patent or proprietary medicine called ergoapiol, the chief constituents of which are savin and ergot, was prescribed For the defence it was contended that a medical man desiring to procure abortion would not be so foolish as to send a woman away with an instrument in her body, thus providing the means of detection of his crime Many technical points were argued for and against the theory of the probability of guilt A large body of professional testimony was called in support of Dr HICKS'S action and reputation The jury returned a verdict of acquittal

Dr J T O CONRY of North Kensington had the misfortune to be charged with a criminal offence upon a little errand girl in his service who made disgraceful accusations against him The story told by the girl not only lacked corroboration but from its nature bore the stamp of falsity and, what was worse, the motive for it seemed to have been the levying of blackmail The evidence to support the indictment was so utterly untrustworthy that the grand jury ignored the bill

Case of obtaining Money under False Pretences

An impudent claim for an alleged debt was the basis of a charge of obtaining money under false pretences against WILLIAM HERBERT HILTON The prisoner sent an account for £1 9s to the executors of the late Dr SIDNEY J ALLDEN of Bridport and alleged that he and Dr ALLDEN had been fellow students at St Thomas's Hospital which was proved to be false To give some colour to his application his letters bore the telegraphic address "Chirurgecos At the Dorchester quarter sessions he was awarded nine months hard labour

Actions for Payment of Fees

Several cases in which the medical profession has loomed large in the legal horizon have been tried in the civil courts The action BUTLER v JOHNSON was tried in the Lancaster county court The plaintiff Mr J J BUTLER of Carnforth, sued for payment of fees for professional attendance on the defendant's son There was a counterclaim for negligence in that the plaintiff had failed to diagnose and appropriately to treat a diseased bone, thus necessitating amputation of the foot Evidence on behalf of Mr BUTLER was given by Mr A S BARLING Mr W D BARROW, and Dr T A BALDWIN After a lucid and able summing up by Judge COVENTRY judgment was given for the plaintiff both on the claim and the counterclaim

In the High Court Mr Justice LAWRANCE had before him the action SMITH v PARL The plaintiff sought to recover 100 guineas for professional services and for damages for assault The defendant claimed damages for negligent treatment of his wife As regards the assault it was admitted and £2 had been paid into court—a sum awarded by the jury It appears that Mrs PARL suffered from an incurable disease and her friends having knowledge through published references to the alleged value of high frequency currents as applied by Mr E A CLOUTE SMITH in such cases resolved to engage the services of that gentleman After the high frequency current had been used for a time the x rays were resorted to and these were employed in such a manner that severe burning of the skin resulted The treatment was intrusted to a gentleman having electric experience but he was not a medical man Mr PARL asserted that he did not know that the x rays were to be used, and, further, that they were negligently used to the patient's harm and suffering The jury found (1) that Mr PARL did not consent to the application of the x rays to his wife, (2) that the treatment was improper, and (3) that the treatment was negligent and unskilful, and they awarded £100 damages The verdict—save the damages £2 for assault—was a general one in favour of the defendant Stay of execution was refused

Dalhyl v Labouchere

This was an action for damages for libel by the plaintiff, a medical man with foreign qualifications against the editor of *Truth* The plaintiff had acted as medical adviser to the Drouet Institute for the Treatment of Deafness *Truth* described him as a quack of the rankest species who had left the Drouet gang in order to carry on a 'practice of the same class on his own account' At the trial before the Lord Chief Justice £1000 damages were awarded On appeal a new trial has been ordered on the grounds of misdirection in that Lord ALVERSTONE directed the jury to find the words libellous whereas he should have left it to them to say whether they were libellous or not An important pronouncement by the Master of the Rolls was that a man may be fully qualified to practise medicine and yet may be aptly termed a quack if he claims power to remedy conditions which are irremediable

Medical Evidence at Inquests

At an inquest Mr TROUTBECK, coroner, when asked by the jury why he had not called the medical officer from St Thomas's Hospital who saw the deceased just before or just after death, replied that he was not going to call "a young hospital house surgeon who perhaps was only just qualified We took occasion to animadvert upon this expression by a judicial authority for a coroner by right of his appointment is a magistrate In our opinion Mr TROUTBECK is mistaken in his views as regards the efficiency of the general practitioner and too rarely consults him Moreover, if a general practitioner is to be deprived of the chances of gaining experience by making post mortem examinations with a view to giving evidence at inquests he loses the opportunity of extending his education in a direction calculated to render him of the greatest service to the public weal

Cases of Poisoning

From the numerous instances of poisoning recorded of late a few may be selected for special notice In the *Journal of the American Medical Association* Dr W J STONE gives an account of an interesting case of poisoning by nitrobenzol A man aged 22 years, was taken seriously ill at 12 30 A M At 3 30 he was in a state of stupor and collapse, his eyes were glazed and his lips, ears, and finger-tips were cyanotic The corneal reflex was absent At 4 45 slight convulsions occurred and soon after death ensued At the necropsy the feet were found to be coloured black The urine contained albumin and the kidneys were in a state of acute desquamative nephritis There were cloudy swelling and fatty degeneration of the liver cells It was stated that on the evening preceding his death the man had put some liquid blacking on his shoes The shoes, and also the blacking smelt not unlike oil of bitter almonds and each contained nitrobenzol, the fatal dose of which is about one gramme

An inquest was held at East Grinstead on the body of an aged man who had succumbed to the poisonous effects of helleborus niger, which was intended for application to the

skin but which was swallowed in mistake for a liquorice powder. 20 minutes after the poison was taken he felt great pain in the stomach and soon became collapsed from paralysis of the heart centre. Consciousness remained to the end which came in two hours. Hellebore acts upon the heart like digitalis and also on the nervous system. A case of poisoning by the plant is recorded in THE LANCET of July 26th, 1856, p. 100.

In the *Scottish Medical and Surgical Journal* for December, 1903, Dr. J. STUART ROSE reported two cases of poisoning by picric acid. In the first case, that of a boy aged nine years, picric acid in the proportion of 30 grains to one ounce of vaseline was applied to scalded surfaces on the cheek and flank. Three days later he was drowsy. There was slight icteric tint of the eyes and the face and the palms were a little yellow. The pulse was 120. On the next day he was still drowsy and vomiting occurred. The temperature was 101·2° F. On the fifth day there was moderate diarrhœa. The whole skin was yellow but mostly on the face, the palms, and the soles. The hair was a deep yellow at the border of the scalp. The urine contained albumin. It was of a dark port wine colour but contained no blood or bile pigment. There was a bright red blotchy general eruption. The symptoms reappeared on reapplication of the picric acid. In the second case a man aged 45 years applied picric acid to a scalded shin. In four days the skin and the conjunctivæ were yellow. In six days the urine was as described above. There were slight diarrhœa and headache. In each case the preparation was too strong. A 1 per cent. solution can be used without bad results.

We have again been induced to comment strongly on the evil effects of inhaling tobacco smoke and to insist that the results are due to carbon monoxide rather than to the generally assumed cause—nicotine. One ounce of tobacco smoked in the form of cigarettes is equivalent to a fifth of a pint of pure carbon monoxide. If two or three mouthfuls of tobacco smoke be passed through diluted blood the latter becomes bright pink and gives the spectrum of carboxyhæmoglobin.

Several interesting additions have been made to the literature of poisoning by illuminating gas. In the *Boston Medical Journal* Dr. F. HOLYOKE narrates a case of attempted suicide by inhaling this gas which consisted of two parts of coal gas and one part of water gas. There was sweating. The pupils were dilated. The face was cyanotic. The limbs were relaxed. The pulse was imperceptible and the cardiac beat was 140 per minute. Respiration was slow and gasping. There was a naphtha-like odour of the breath up to the fourth day. The temperature was subnormal till the third day. Consciousness returned on the second day. The muscles of the left leg were paretic for several weeks. In the *Dublin Journal of Medical Science* Professor E. J. MCWEENEY gives the history of several cases of poisoning by illuminating gas and points out that fatalities from this cause have been more numerous since 1900 when the proportion of carbon monoxide in gas was raised from 6 to 16 per cent. In one instance carbon monoxide was present in the blood to the extent of 73 per cent. of its volume. 2 per cent. of carbon monoxide in air causes headache, giddiness, and muscular prostration, while 4 per cent. is fatal. Dr. STAEHELIN in a paper read before the Royal Society gives the results of a series of experiments to determine the poisonous value of benzene in coal gas. In frogs motor phenomena were traced to the action of benzene. A small percentage of benzene produced no acute or chronic poisonous effects when inhaled by rabbits. It was suggested that in man minute quantities absorbed by the lungs are rapidly oxidised and secreted as an aromatic sulphate and that the poisonous action of coal gas on mammals was due solely to carbon monoxide. Mr. A. WYNTER BLYTH supports VAHLEN'S contention that warm-blooded animals and frogs die more rapidly in coal gas than would be expected from its proportion of carbon monoxide.

Mr. LESLIE ROBERTS gives in the *British Journal of Dermatology* the effects of the double poisoning by antimony and lead from the use of the linotype machine. A man, aged 29 years, had pains in the limbs, tenderness of the fingers, constipation, excessive sweating, muscular tremors, pink discolouration of the palms and the fingers, and faint papular eruptions on the thenar and the hypothenar eminences. Lead was detected in the urine. There was no arsenic in the linotype metal.

On the subject of Wasp and Bee Stings Dr. PHISALIX in a communication to the Academy of Sciences, Paris, states the results of experiments conducted by him. Sparrows were found to be very susceptible; they suffered from paralysis, choreic movements, and respiratory failure. Dr. PHISALIX believes that there is a convulsive, a stupefying, and a locally irritative principle in the poison of wasps and bees. A fatal case was reported in the *British Medical Journal*, Nov. 5th, 1898, p. 1429. In a case recorded in THE LANCET of Oct. 26th, 1901, p. 1120, there were general urticaria, nausea, vomiting, and some prostration. Idiosyncrasy is a factor in some instances. BROUARDEL mentions the case of a man stung by a bee. He recovered after an attack of syncope. Two years later he was again stung when he died.

DENTAL SURGERY.

Proposed Degrees in Dentistry.

The commencement of the year was marked by an extraordinary general meeting of the British Dental Association called to discuss the question of degrees in dentistry. The meeting, which was a large one, adopted a motion by a majority of two to one that degrees in dentistry were undesirable. The question was dealt with in our editorial columns and the view was expressed that the granting of degrees in dentistry to those not holding medical qualifications would be a distinctly retrograde step.

Dental Section of the British Medical Association.

A feature of the year was the formation of a Dental Section at the annual meeting of the British Medical Association at Oxford. The influence of this section should be to encourage a broadening of the views of the dental practitioner and also to permit the general medical man to come into closer touch with the practice of modern dental surgery. A discussion on Oral Sepsis in Relation to Disease formed the principal item of the programme and from a perusal of the remarks of various speakers it is quite clear that the importance of the oral cavity as a source of infection is being more fully recognised.

Dental Pathology.

A general review of the communications to the dental societies and various journals shows that the problems of dental pathology are being considered from a broader point of view than heretofore and this broadening of views is having a marked influence on the practice of dental surgery.

Papers and other Communications.

Several valuable papers have been communicated to the various journals during the past year. Mr. J. G. TURNER has contributed a thoughtful paper[1] on the Influence of the Growth of Bone in the Position of the Teeth. Mainly from the study of deformities of the dental arch he is of the opinion "that eruption of the teeth and the eventual assumption of their normal position in the dental arch are dependent on the regular and orderly progress of the bony growth of the maxilla and mandible. If this growth is interfered with, if the bone currents are arrested, the teeth mark time in the position in which that arrest found them,

[1] Brit. Med. Jour., Nov. 26th.

and if the period of arrest be extended beyond the growing period of that part these positions become permanent '

In a paper entitled " The Problem of Dental Caries, ' by Mr S W R COLYER,[2] certain current theories as to the etiology of this affection are briefly reviewed and criticised and a new theory is advanced The important question is To what are the earliest stages of this affection due ? He has come to the conclusion after a " varied clinical experience that the points of greatest capillary attraction on a tooth are those at which the morbid process commences , so that it must be due to the fluid rather than the solid constituents of food and to its increased fermentability He traces this increasing fermentability during past centuries to the introduction of the more easily fermentable carbohydrates and to the presence of soluble starches due to cooking, and more recently to the wide use of artificial glucose and invert sugar in the manufacture of sweets cheap sugar, and preserves of all kinds During the eating of food of this nature the soluble carbohydrates collect at the points of greatest capillary attraction , it follows that if acid fermentation be sufficiently rapid to occur before the saliva can diffuse amongst these collections and dilute them so as to render them innocuous a small quantity of acid will be formed which, acting upon the adjacent tooth substance, will produce the first stage of this disease Looked at from this point of view the theories, such as altered environment and refinement of food due to the elimination and softening of its fibrous elements, must be considered predisposing rather than immediate causes

In a communication to the *British Dental Journal* for February Mr J THORNTON CARTER discusses the Mechanism of the Eruption of the Teeth and expresses the opinion that the gubernaculum plays an important part in the process of the eruption of the teeth The motive force he considers is derived from absorption and deposition of bone operating on the muco periosteum of the mouth Although his investigations are not complete he nevertheless brings a good deal of evidence from the study of comparative anatomy to support his views

In the Transactions of the Odontological Society for April appeared an interesting paper by Mr A SMITH WOODWARD on the Teeth of Extinct Animals A reference is made to the curious tooth spirals found in certain shark like fishes of the lower Devonian period and an explanation is offered of these complicated spirals by a study of fossils of helicoprion discovered during recent years in the permo carboniferous rocks in Russia and Japan An account is also given of the ancestry of the modern proboscidians, the evolution of these animals being shown through moeritherium palæomastodon and tetrabelodon A well illustrated and useful paper on the Occlusion of the Teeth was published in the *Dental Cosmos* for September from the pen of Dr M H CRYER In the same journal for April Mr A HOPEWELL SMITH discusses the degenerations of the periodontal membrane and draws attention to the significance of senile atrophy of the tissue The relations of degeneration of the pulp to dentine and interglobular dentine formed the theme of a thoughtful and suggestive paper by Mr F J BENNETT[3] The communication is of interest as it throws light upon the question of calcification of the pulp in atrophy and other pathological conditions Among other communications of interest the following may be mentioned the Entire Absence of Teeth in a boy, aged 16 years by Mr W RUSHTON , A case of Severe Syphilitic Ulceration of the Lips, by Mr T MURPHY[4] the Removal of an Odontome from the Mandible, by Mr J S AMOORE and Mr J H GIBBS[5], and a Case of Composite Odontome, by Mr J LLWIN PAYNE[6] The diseases of the periodontal membrane continue to attract much attention Mr KENNETH W GOADBY[7] in a paper has described a series of inoculation experiments with material obtained from cases of progressive periodontitis and quite recently Mr J F COLYER[8] has drawn attention to the prevalence of periodontal diseases in domestic animals and in animals kept in captivity

New Books

Only a few books have been published during the year and among them may be mentioned the fifth edition of 'Irregularities of the Teeth and their Treatment by Dr E S TALBOT, Notes on the Treatment and Filling of Teeth second edition by Mr W CASS GRAYSTON, Irregularities of the Teeth by Dr SIM WALLACE, and Orthodontia by Dr J H JACKSON

Anæsthetics in Dental Surgery

The past year has seen a marked growth in the use of ethyl chloride as an anæsthetic for use during dental operations Several new appliances for the administration of this anæsthetic have been described and there is but little doubt that this drug will be more extensively used in the future for those operations requiring a longer period of anæsthesia than is obtainable with nitrous oxide The prolonged administration of the latter agent is also gaining ground and has been extensively used with success during the past year at the Royal Dental Hospital The knowledge of local anæsthetics has made but little advance

Obituary

Mr JAMES SMITH TURNER one of the most notable men dental surgery has ever claimed passed away at the beginning of the year Mr TURNER was 72 years of age and had lived a life entirely devoted to the interest of the dental profession He was one of the founders of the British Dental Association and it was mainly owing to his exertion that the Dentists Bill became law Another well known practitioner has been lost to dentistry in Mr S J HUTCHINSON He took an active part in dental affairs and was for many years officially connected with the Royal Dental Hospital In July Mr ALFRED SMITH died at the age of 57 years He was the senior dental surgeon to the National Dental Hospital The deaths of Mr H B EZARD (Edinburgh) Mr J J HOLFORD (London) Mr J H BROWN (Woolwich), Mr R H MOORE (Dublin), and Mr H CAMPION (Manchester) have also to be recorded

ANATOMY AND PHYSIOLOGY

Central Nervous System

The last meeting of the International Congress of Medicine took place in the spring of the year 1903 at Madrid and, as was to be expected in the capital whence the remarkable histological observations of Dr SANTIAGO RAMON Y CAJAL emanated which revolutionised all former ideas of the structure and connexions of nerve cells numerous communications on kindred subjects were read The *comptes rendus* of the sections only appeared in the year 1904 The distinguished microcopist just mentioned discussed at considerable length the results of his investigations upon the structure of the optic thalamus on the anterior corpus quadrigeminum and supplied a long critique on the theory of BETHE in regard to the grey substance The optic thalamus he considers to be a double organ having a superior sensory portion receiving impressions from the eye ear and skin by fibres which form arborisations around cells the axons of which run to the cerebral cortex The cells of the cortex give off axons which arborise around the cells of the inferior or motor portion of the thalamus which contains many motor centres

Our present knowledge of the evolution in mammals of the

[6] Brit Dental Journ
[7] Brit Med Journ Nov 19th
[8] Transactions of the Odontological Society November

visual cortex has been interestingly summed up by Dr. F. W. MOTT in a lecture delivered before the Ophthalmological Society of the United Kingdom in November. In this lecture the histological features of the cortex cerebri associated with visual impressions in different animals were compared and the topographical disposition of the visual areas was laid down more precisely than heretofore. An endeavour has been made by Dr. R. S. WOODWORTH and Professor C. S. SHERRINGTON to trace the paths by which impressions of pain pass up to the brain. The plan adopted was to remove the brain in front of the mesocephalon, to hemisect the cord, and to observe the effects of stimuli applied symmetrically to the two sides of the body. They found that the headward path in the spinal cord for nociceptive or algesic impulses from skin, muscle, or viscus was the lateral column on each side, the majority of the fibres being crossed. A very elaborate description of the lobes and lobules of the cerebellum with the intervening fissures in mammals has been given by Professor O. CHARNOCK BRADLEY who, commencing with the simple types met with in the shrew, the bat, the squirrel, and the pig, passes up to the primates.

The order in point of time when the investment of nerve fibres with myelin takes place has been followed out in certain areas of the brain by Professor FLECHSIG. Proceeding on the assumption that the contemporary myelinisation of the fibres of any limited part is indicative of community of function, he has been able to map out no less than 36 elementary myelogenetic areas for only some of which can a special function be assigned. The development of myelin takes place earlier in the sensory than in the motor paths. The primary visual sphere as shown by this mode of research is constituted by the lips of the fissura calcarina, the gyrus descendans, and a limited area at the pole of the third occipital convolution. The primary auditory sphere is the transverse convolution of the temporal lobe. Pursuing a different method to determine the functions of different parts of the brain Dr. W. PAGE MAY has introduced a fine cautery horizontally into the optic thalamus and on subsequent examination of the spinal cord finds a wedge-shaped tract of degeneration which is situated in the mesial portion of the posterior columns of the cord and extends from the hinder part of the optic thalamus to the upper part of the lumbar region, where it is lost. For various reasons he regards these tracts as endogenous, the fibres connecting parts more or less remote in the cord itself. Dr. F. GRIFFITH and Dr. W. B. WARRINGTON have paid special attention to the ganglia on the dorsal roots of the spinal nerves and find that they are of much more complex organisation than has been hitherto supposed. The cells which they contain are by no means uniform in their characters but present differences in their form and size which distinguish them from each other and they think it probable that the axons which proceed from them may have their own special distribution and function.

Union of Divided Nerves.

Professor J. N. LANGLEY and Dr. H. K. ANDERSON'S experiments on the union of divided nerves have not only a physiological but a surgical interest. They show that the central end of any efferent or motor nerve after division if applied to the peripheral end of any other motor nerve will effect a union that is functionally active, so that stimulation of the upper or proximal segment will cause contraction of the muscles to which the lower or distal segment is distributed. The central end of an efferent nerve will unite with preservation of its functional activity with the peripheral end of any preganglionic fibre; the phrenic, for example, will unite with the sympathetic and when stimulated will give sympathetic effects. But the central end of an efferent nerve will not unite with the peripheral extremity of a postganglionic nerve. Nor will afferent fibres unite with efferent fibres: that is to say, that sensory will not unite with motor fibres. Where union occurs in mixed nerves it seems probable that a kind of attraction or affinity, or as it has been termed a chemio-tactic influence, is excited, bringing fibres of like function into relation with each other. Hence it appears that the recovery of motion and sensation in parts the nerves of which have been divided is indubitable but the mode in which the repair is effected and the functional activity is restored is still the subject of conflicting evidence. Dr. ROBERT KENNEDY finds that the axis cylinders of the peripheral segment undergo pigmentation and, together with their myelin sheaths, absorption; leucocytes and connective tissues occupy their place. The neurilemma cells proliferate and give rise, as Mr. C. A. BALLANCE and Dr. PURVES STEWART contend, to fine nerve fibres. These, if the nerve remains ununited, only attain to a certain stage of development, in which they remain for a long time with little alteration. They present an axis cylinder invested by protoplasm which contains small drops of myelin, the whole surrounded by a delicate sheath of Schwann. If, however, the two ends of the divided nerve are brought into contact union takes place with resumption of functional activity. On the other hand, whilst admitting that the activity of the neurilemmal cells have a certain relation to the development of new fibres, Dr. MOTT, Dr. W. D. HALLIBURTON, and Dr. P. EDMUNDS contend that the cells multiply, appear to share with phagocytes in the removal of the débris of the degenerating distal segment of the divided nerve, become elongated, and look as though they were connected end to end, thus leading to the formation of what have been regarded as embryonic nerve fibres, but they agree with Professor HOWELL and Professor HUBER that although the peripheral structures are active in preparing the scaffolding, the axis cylinder, which is the essential portion of a nerve fibre, has an exclusively central origin. The neurilemmal cells are really situated outside the new axis cylinder and conceal it within them.

A correction or emendation of the law of degeneration taking placing in divided nerves has been propounded by VAN GEHUCHTEN. The Wallerian doctrine is to the effect that after division of a nerve fibre that part of the axon which is isolated from the nerve cell degenerates whilst the part remaining attached to the cell preserves its normal structure and functional activity. VAN GEHUCHTEN is in full accord with the former statement but calls in question the latter, maintaining with DARKSCHEWITSCH, DURANTE, and others that a centripetal degeneration to which the term retrograde degenerescence has been applied may, though it does not always take place, extend from the seat of injury towards the cell. The disregard of this process has led, he believes, to many errors in attributing functional activity to nerves that have been cut. It has been overlooked because this indirect degeneration only occurs when the animal survives the injury for 15 or 16 days. It is almost invariably present after the lapse of 25 or 30 days, whereas the direct degeneration may be observed in the course of six, seven, or eight days after the division of the nerve.

Relations of Protagon, Cholin, and Neurin.

The nature of the substance named protagon, forming an important constituent of the brain, has been again examined by Mr. W. CRAMER who decides in favour of the view of its discoverer, Professor O. LIEBREICH, that it is a well defined and isolable chemical compound and not, as Professor HOPPE-SEYLER maintained, a mixture of several substances. By its decomposition with baryta water cholin is formed, a base that contains one-fifth of the nitrogen present in protagon. Cholin differs from the poisonous base neurin by the solubility of its chromate in water as opposed to the insolubility of the neurin chromate. Cholin and neurin are interesting since both are formed by the action of baryta on lecithin and stand in relation with the ptomaines.

Digestion

The important and highly interesting researches of the Russian physiologist Professor PAWLOW given in detail in his lectures on the work of the digestive glands published two years ago have induced several experimenters to follow in the same direction Professor PAWLOW maintained that partly through psychic influence each kind of food called forth a particular activity of the digestive glands, with special properties of the secreted juices Thus in the case of the stomach differences in the ferments contained in the gastric juice were observed according to whether milk, bread, or meat was given to the animal In the case of the pancreas he found that the work of the gland is specialised both as regards the quantity and the quality of the juice it secretes, and when in feeding animals the kind of food is altered, and the new diet is maintained for some time, it is found that the ferment contained in the juice becomes from day to day more and more adapted to the requirements of the food Pursuing and extending this line of research Mr F A BAINBRIDGE finds that with a change in diet there is not a mere increase or decrease of a ferment already and normally present in the juice secreted but that in the process of adaptation to new and unusual food the pancreas, for example, is capable of generating a new ferment fitted to effect digestion Thus the pancreas of adult dogs contains normally no lactase, though that enzyme is present in their intestinal mucous membrane, but when dogs are fed for a fortnight or three weeks on milk diet their pancreatic juice obtained by means of secretin invariably contains lactase Mr BAINBRIDGE has further shown that the lactase of the pancreas is in no way derived from that present in the intestinal mucous membrane but is formed by the pancreas itself and represents a definite adaptation to a milk diet on the part of the pancreas, and he believes that the change is carried out by a chemical mechanism, the lactose ingested acting upon the intestinal mucous membrane to produce some substance which is conveyed to the pancreas by the blood and stimulates the pancreas to form lactase

The Pancreas

The histology of the pancreas still presents some features that require elucidation and will only be thoroughly understood when the gland has been investigated in a large number of typical forms in the animal series The islets of Langerhans, not very well described in any histological work, have been made an object of special study in the bony fishes by Professor JOHN RENNIE These islets of large and well-defined cells disposed in small masses without ducts are now generally regarded as blood glands intercalated in the proper tissue of the pancreas and producing an internal secretion which is absorbed into the blood through the walls of the numerous capillaries with which they are supplied They correspond, therefore, to a ductless gland and there is no doubt that the cells are functionally active They do not, however, contain any amylolytic ferment though they are capable of inverting grape sugar Mr J BARCROFT and Dr E H STARLING have found the activity of the pancreas to be accompanied by an increased absorption of oxygen from the blood which normally greater than in other parts of the body, takes place irrespectively of the increased blood flow through the organ The researches of Dr H M VERNON on the peptone splitting ferments of the pancreas are of considerable interest Up to a recent period it was thought that the ferment of the gastric juice, pepsin, converted the insoluble albumins into soluble peptones and that a similar action was effected by a ferment of the pancreatic juice named by KÜHNE trypsin, though this being more energetic carried the digestive process a stage further and broke up both the albumins and the peptones into amido acids or crystallisable substances such as leucin and tyrosin and hexon bases, such as arginin and lysin The discovery by COHNHEIM of a ferment that can peptonise casein but not albumin or fibrin, and named by him erepsin, suggested that trypsin itself might not be a simple ferment but a mixture, and the experiments of Dr VERNON have convinced him that pancreatic extracts contain two independent ferments —viz, trypsin which exists in the form of a soluble zymogen, and pancreatic erepsin the zymogen of which is insoluble The digestion of the proteids as it occurs in the animal body appears from Dr VERNON'S observations to be that there is first a hydrolysis to the albumose and peptone stage by pepsin, and then a further hydrolysis into crystalline decomposition products by trypsin, pancreatic erepsin, and intestinal erepsin The processes of proteid digestion in plants have been shown by Professor S H VINES in a paper read before the Linnean Society to be essentially similar He finds that just as Dr VERNON has been able to prove in animals that a protease of the nature of erepsin is capable of being extracted from every tissue in the body so Professor VINES has ascertained that a similar form of enzyme is very generally present in plants, nearly all plants being able to effect peptolysis in an acid medium, though only a limited number can digest fibrin Dr VERNON has found that a kind of protective influence over trypsin from the action of acids and alkalies is exerted by the presence of proteids, so that nearly eight times more trypsin is destroyed per hour in the absence of proteids as compared with the quantity destroyed when 4 per cent of proteids are present M LUCIAN DE ZILWA'S experiments show that the intravenous injection of secretin and pilocarpine augments the quantity of the pancreatic secretion but there is a difference in the effects the juice secreted after the intravenous injection of pilocarpine being less alkaline but containing four times more solids than that after the injection of secretin

Movements of the Alimentary Canal

Our knowledge of the movements of the stomach and the intestines and their nervous control though becoming more precise is still in a very dubious state Thus, whilst agreeing with the generally accepted views in regard to the action of the vagi on the musculature of the stomach, Dr PAGE MAY has satisfied himself that in dogs the splanchnic nerves have no direct influence whatever, either motor or inhibitory, on the muscular wall of this organ On the other hand, through the researches of Dr ARTHUR KEITH, Mr F R ELLIOTT, and Dr E BARCLAY SMITH, it appears that the ileo colic valve is a muscular sphincter quite under the control of the sympathetic nervous system and they state that the nerve fibres supplying it issue chiefly from the thirteenth thoracic and first and second lumbar roots When stimulated these fibres cause the sphincter to contract but inhibit the circular muscle in the adjoining wall of the ileum and the colon Removal of the spinal cord abolishes the power of the sphincter to keep apart the contents of the ileum and the colon Comparing the statements of Dr PAGE MAY and of Mr ELLIOTT it certainly seems to be remarkable that the movements of the stomach should hold no relation to the sympathetic system whilst the movements of the ileo colic sphincter and of the walls of the ileum and the colon should be under the control of that system Mr ELLIOTT seems to have established his views that antiperistalsis is a characteristic feature of the muscular activity of the caecum and the first part of the colon the contractions being of an autogenetic nature and not a coordinated movement of contraction preceded by relaxation In fact, the reversal of a true peristalsis has not been observed The sacro-visceral nerves do not control the caecum but cause contraction of the circular and longitudinal muscular fibres of the final part of the colon

The Vermiform Appendix.

The Huxley address was delivered at the Medical School of the Charing Cross Hospital by Sir WILLIAM MACEWEN and in this he gave a good account of an organ of the body that until its surgical importance was recognised received but little attention—the vermiform appendix. Though as life advances it undergoes, in 3 or 4 per cent. of cases, total occlusion of its lumen, it presents a well-marked glandular structure with lymphoid nodules and secretes a fluid that is probably an adjuvant in the later stages of intestinal digestion.

Metabolism of Man and Animals.

M. H. LABBE has recorded that the quantity of nitrogen ingested and egested daily in man may, with preservation of normal health, be reduced far below the amount usually considered to be requisite. The quantity need not exceed seven and a half grammes daily. The numerous experiments of Dr. M. S. PEMBREY and Dr. E. I. SPRIGGS on the influence of fasting and feeding respectively on the respiratory changes in rats show that during fasting the respiratory exchange falls rapidly to a minimum where it remains remarkably constant. With a liberal supply of carbohydrates the respiratory exchange quickly and largely increases.

Effects of Radium and X and N Rays.

The physiological effects of the radium emanations and the x rays on biological processes have been studied by several observers who have found that exposure to radium bromide for one and a half hours causes the infusorian Nassula to enlarge, its nucleus becoming more apparent, whilst the next generation presented anomalies and Amœbæ became encysted; exposure for 20 hours proved fatal; streptococci and spirilla were soon killed; mice placed in a flask with 15 grammes of this salt died in six or seven hours. Respiratory troubles commenced early and after death intense pulmonary congestion was found. It is stated that these rays attenuate the virus of the poison of the viper and that the digestive ferments are rendered inactive by them. It has been observed that certain foci of organic life give off "n" rays—such, for example, as the cilio-spinal, vaso-motor, and vesico-spinal centres—and according to M. JEAN BECQUEREL and M. ANDRÉ BROCA the brain at the beginning of the action of anæsthetics gives off enormous quantities of "n" rays.

Effects of Pressure.

M. W. CHLOPIN and M. G. TAMMAN have exposed various micro-organisms, moulds, bacteria, and yeasts to great pressures, amounting in some instances to 6000 kilogrammes to the square centimetre. The movements were found to be rendered slower but the organisms were not killed.

Ductless Glands.

Owing to the munificent grant of Mr. FRANCIS MASON to promote investigations of the ductless glands a considerable number of researches have been instituted and though each is fairly complete in itself it is difficult to draw any general conclusion and it would perhaps be better were each gland to be made the subject of a combined attack, one observer taking up the histology, another the changes in the blood, a third the effects of removal, and others the effects of subcutaneous or intravenous injection of the extract, which would prevent the unnecessary repetition of experiments and would utilise time. Amongst the more important researches are those of Mr. JAMES HENDERSON on the thymus gland in a large number of cattle, which show that castration causes a persistent growth and a retarded atrophy of the gland and that in bulls and unspayed heifers the normal process of atrophy is greatly accelerated when the bulls and heifers have been used for breeding. The histology of the lymphatic glands generally has been given by Dr. T. L. BUNTING who particularly deals with the reticulum, showing that by differential staining agents it is composed of protoplasm and fibres. The influence of pituitary gland substance on metabolism has been examined in dogs by Dr. JOHN MALCOLM. The animals were fed on horseflesh and oatmeal and when equilibrium between income and expenditure had been established two, three, four, and six grammes of the dried glandular part of the pituitary body were given daily with the food. The results of the analyses show that the administration of the glandular lobe of the pituitary body in the dry form tends to cause a retention of nitrogen and probably of chlorine in the system, while the output of phosphorus is increased.

It seems strange that a difference should exist between the body and the infundibular part of so small an organ as the pituitary body but the experiments of Dr. W. H. HOWELL show that the substance producing contraction of the arterioles is contained in the infundibular portion of the pituitary body, and Dr. PERCY T. HERRING has shown that the effects produced in frogs by the intravenous injection of the extract of this part are due to some substance or substances which stimulate both the intrinsic inhibitory and intrinsic accelerator mechanism of the heart, the action on the former being abolished by atropine.

The remarkable influence of the tissue extract of the suprarenal bodies containing adrenalin upon the blood pressure, which experiments on the vessels of the conjunctiva show to be exerted topically, has led Dr. J. W. SCOTT-MACFIE to investigate the direct action of tissue extracts generally on various forms of protoplasm. The sources of the tissue extracts were the suprarenal body, infundibular and hypophysial parts of the pituitary body, the testis, ovary, thymus, brain, spleen, muscle, pancreas, and corpus luteum. The kinds of protoplasm experimented on with extracts of these tissues were the embryonic heart of the chick, leucocytes, and cilia. The effects were negative: the rhythm of the heart was not accelerated or retarded, nor was the rate of the heart-beat altered; the activity of leucocytes obtained from the blood of the frog was not appreciably changed nor was there any specific action exerted upon ciliary movement when that was rapid, as shown by the speed with which a minute body moved over the mucous membrane of the gullet of the frog, or when the movement was slow, as when examined with the microscope. Dr. T. G. BRODIE and Dr. W. E. DIXON adduce reasons for their opinion that adrenalin acts not directly on muscles but on nerve endings and essentially upon those of the sympathetic nerve.

Dr. D. N. PATON and Dr. A. GOODALL investigated the results of removal of the thymus gland in guinea-pigs and found that it had no effects on the number or character of the red corpuscles but reduced the proportion of all forms of leucocytes and diminished the power of the animal to resist the toxins of staphylococci and streptococci.

Some evidence has been obtained that the functions of the adrenals are intimately related to the activity of both striated and unstriated muscles by Dr. E. PEREZ KUNIGA of Madrid, Dr. CHRISTIANI of Geneva, and Mademoiselle J. JOTEYKO of Brussels. It has been pointed out that removal of both suprarenal capsules is followed by marked paralytic troubles. In frogs incoördination of the muscles of the hind legs has been noticed and at a later period death. The capsules are supposed to produce a substance possessing tonic qualities which act as an antitoxin against the poisons generated by fatigue. After their removal frogs die earlier if the muscles are made to work by electricity. This toxic substance, however, is not adrenalin. M. LEWANDOWSKY has called attention to the fact that adrenalin when injected into the veins acts powerfully on the smooth

muscles of the eye and orbit that are innervated by the sympathetic nerve; this is shown in the dilatation of the pupil that occurs, the retraction of the nictitating membrane, the contraction of the smooth muscle of the lids and of the orbital membrane, the propulsion of the globe forwards, and the enlargement of the palpebral fissure. WESSELY observed mydriasis after subconjunctival injection of adrenalin and Professor LANGLEY not only saw all the above symptoms but, in addition, contraction of the uterus and of the deferent canals of the testis.

Dr. W. B. DRUMMOND studied the histological changes produced by the injection of adrenalin chloride and found that whilst the pancreas, spleen, and suprarenal organs presented no marked alteration in structure, the changes in the kidney were very distinct; the cells of the convoluted tubules became swollen with cloudy contents and sometimes detached from the basement membrane lying free in the lumen, a parenchymatous nephritis being established. At the same time glomerular changes were not noticable except that the capillaries were sometimes engorged. In the liver the most important pathological condition was necrosis affecting the centres of the lobules and occurring diffusely through the organ. Red corpuscles and leucocytes occupied the central zone. The lungs presented intense congestion in some parts and pallor in others; the fatal issue which resulted from large doses appeared to be attributable to acute œdema of the lung.

From his researches on the effects of extirpation of the spleen Dr. THOMAS LEWIS finds that hæmolysis is only effected to a small extent by this organ. There is a proliferation of leucocytes but the red corpuscles are broken down not within but outside the phagocytes. M. J. NICOLAS and M. F. DUMOULIN observed in the same circumstances increase of leucocytes for several months and then a return to the normal number—immediate diminution, then increase, and finally persistent reduction of the number.

Development.

A description of the early stages of development of mammalian ova and with regard to the formation of the placenta in different groups of animals was given by Professor ARTHUR ROBINSON in lectures delivered before the Royal College of Surgeons of England and Dr. JOHN BEARD has described the characters of germ cells and the changes which they undergo from the earliest period onwards. He points out that dermoid cysts of the ovary and testis containing bones, hair, teeth, and sweat glands represent embryologically the anterior end of an embryo. The structure and evolution of the skin have been followed out by ED. RETTERER who dissents from the commonly accepted view that the epidermis and corium are essentially distinct, since in various instances the epidermic layer gives origin to, and passes into connective tissue. The development of the cotyloid cavity as explaining congenital luxations of the femur has been studied by M. P. LE DAMANY, that of the nasal fossæ of vertebrates by Dr. LÉON DIEULAFÉ, and that of the veins of the liver by Dr. C. BONNE.

Professor MARCUS HARTOG proposes that the term fertilisation should be discarded and that it should be replaced by "syngamy," which he defines to be a process of cell or nuclear fusion not necessarily associated with germination. In the simplest and most primitive types the cell newly produced by syngamy passes into a condition of rest and only germinates after the lapse of some time and the occurrence of favourable conditions. The formation of a membrane round the odsphere is probably the last trace of this process in the higher animals. The minute size of the sperm is correlated with the presence of large stores of unorganised reserves in the egg and the first act of the sperm on entering the ovum is to procure nourishment for the male nucleus which is in too concentrated a condition to act on the female nucleus. It accomplishes this by producing an enzyme and digesting some of the reserve material of the ovum. The yolk granules are not living matter at all but supply the material for the growth both of the sperm and of the germ cell. Complete conjugation then takes place and segmentation commences.

Bibliography.

Amongst the more important books that have been published in this department of medicine are:—Professor LEUWENTHAL, "Histology"; Dr. PHILIP STOHR, "Text-book of Histology"; Dr. P. E. LAUNOIS, "Manuel d'Anatomie Microscopique"; Dr. P. POIRIER and M. B. CUNEO, "La Système Lymphatique," translated by Mr. CECIL H. LEAF; Professor H. BORUTTAU, "Physiologische Chemie," translated from the Italian of Professor BOTAZZI; Professor ARTHUS, "Éléments de Chimie Physiologique"; Dr. W. D. HALLIBURTON, "Handbook of Physiology"; Professor I. OTT, "Text-book of Physiology"; Professor J. P. MORAT and Professor MAURICE DOYON, "Traité de Physiologie," vol. i.; and Mr. E. H. TAYLOR, "Applied Anatomy."

Obituary.

The death of Professor HIS in the spring of the year at Leipsic removed a renowned teacher and an able investigator from the scene. His labours, carrying forward the work of MARTIN BARRY, VON BAER, VON RATHKE, MÜLLER, REMAK, BISCHOFF, and others, materially enlarged our knowledge of the process of development in the various organs of the body.—The death of ETIENNE JULES MAREY in May last, at the age of 74 years, has lost to science a well-known and original physiological worker. His name will always be remembered in connexion with the graphic method which he applied in his researches made in conjunction with M. CHAUVEAU on the movements of the heart. His numerous essays on the Rapidity of Conduction in the Nervous System, on the Nature of Muscular Contraction, on Respiration and the Voice, on Locomotion in Man and Animals, on the Flight of Birds and Insects, and on the Application of Chromo-photography testify to his earnest and useful labours.

ANÆSTHETICS.

A general review of the work done in anæsthetics during the past year cannot but impress the reader with the fact that, while little that is really new has to be recorded, yet that much valuable research work has been undertaken, the net result of which is a better understanding of many of the vexed questions that still remain to baffle the intelligent student. The experience of the use of ethyl chloride and other members of the series, to which we shall have to refer in more detail later, seems to prove that, in spite of the adverse opinions that some authorities have expressed, they are of great value and are likely to become a permanent part of the armamentarium of the modern anæsthetist. Chloroform, as usual, has monopolised much of the attention of those engaged in research and important discussions have taken place at some of the societies upon the employment of vapours of definite and low percentage strength in general surgery. Perhaps it has been accepted as an unpleasant but inevitable fact that chloroform will have its victims and that deaths, although rare, are inevitable. The result of this pessimistic way of regarding the matter has possibly obscured the view that when profound degrees of chloroform narcosis cease to be demanded many lives will be saved. This appears to be the opinion of some authorities and the discussions to which we have referred embraced this question as well as the means to be adopted to secure accurate dosage in the administration of chloroform.

Dosimetry of Chloroform.

Dr. A. D. WALLER[1] has contributed a paper to our columns

[1] THE LANCET, July 9th, 1904, p. 76.

which deals with various apparatus proposed for the quantitative administration of chloroform, and Mr. W. LEGGE SYMES, at the instance of Dr. WALLER, has undertaken an *interesting investigation of the amount of chloroform vapour* which is drawn from beneath a Skinner's mask. Whatever the last word may be as to the value of dosimetric chloroform inhalers, such as that invented by Mr. VERNON HARCOURT and brought before the British Gynæcological Society by Dr. DUDLEY W. BUXTON,[2] there is no question that the trend of opinion is towards the adoption of methods which give an accurate indication of how much anæsthetic the patient has inhaled at any given time and what strength of vapour he is actually breathing. In a debate held before the Society of Anæsthetists this formed the contention, although the Vernon Harcourt regulator was the text. The same may be said of a precisely similar discussion before the Royal Medical and Chirurgical Society which was opened by Dr. F. W. HEWITT. The British Medical Association, the meeting of which at Oxford was reported in our columns, received the report of its special chloroform committee, which committee is responsible for the introduction of the Vernon Harcourt regulator and the adoption of a 2 per cent. maximum strength of chloroform vapour as an adequate and safe limit for general surgical purposes. DUBOIS'S chloroform apparatus, which has been successfully demonstrated by Dr. WALLER and Dr. P. M. CHAPMAN[3] of Hereford and which has been described in THE LANCET, is constructed with the view of supplying a chloroform vapour of definite strength and possesses undoubted merits, as Dr. WALLER and Dr. CHAPMAN have indicated. The employment of oxygen with chloroform, which M. KIRMISSON reintroduced to the Academy of Medicine in Paris, has been periodically brought before the profession since the days of PAUL BERT who was the first to essay its use. At one time it was believed that the oxygen lessened the lethal properties of chloroform but there is little doubt that the only rôle it plays is that of a diluent. The apparatus of RODE, to which M. KIRMISSON called attention, possesses this merit, that it accentuates the importance of giving definite doses of the anæsthetic in the atmosphere inhaled.

Action of Chloroform upon the Tissues.

The intimate relation between chloroform and the actual protoplasm of the tissues has been made the subject of research by MOORE and ROAFE. That this anæsthetic is a poison of the protoplasm has been recognised and it has been assumed that certain substances such as lecithin possessed selective power of absorption. However, the research before us appears to indicate that the proteids of blood and serum form a more or less stable association with the anæsthetic with the result that the function of the protoplasm is at first diminished and eventually annulled. A close interaction takes place, not a solution or mere effect of contact, and in the case of the brain, of the tissues of the nervous system at large, and of the musculature of the heart it is the protoplasm as a whole and not merely specially differentiated forms which enter into relation with chloroform and evince its effects as a result of this intimate association. These results gain support from a statement of experimental work conducted by Sir VICTOR HORSLEY and others and presented at the Oxford meeting of the British Medical Association. How important is the recognition of this intimate interaction between anæsthetics and the protoplasm is emphasised in diseased conditions of the tissues of the organism.

Status Thymicus.

We have drawn attention in our columns both to the curious condition called "status thymicus" and its peril in relation with anæsthetics as well as to the peculiar degenerative changes found in some persons, especially children, after prolonged anæsthetisation. Dr. F. SIMMONS[4] of New York has recorded a death under chloroform due apparently to the "status thymicus." Dr. G. BLUMER[5] has studied the subject and indicates its importance both from a professional standpoint, since it is obviously necessary that we should be able to recognise the condition and so, when possible, to avoid the use of chloroform, and from a medico-legal aspect, since sudden deaths may occur and suspicion of malpraxis or even of foul play may easily arise. The signs given by ESCHERICH and EWING are practically those which occur in poorly nourished scrofulous persons save that those afflicted with the status thymicus are often covered with a pad of fat and appear superficially to be in good health except for evidence of a large persistent thymus and of lymphatic hyperplasia. Death results from cardiac paralysis as well as from asphyxia and probably some of the otherwise inexplicable deaths under chloroform which are so common in children operated upon for enlarged tonsils and adenoid growths may fall into this category. Similar deaths have been recorded of patients afflicted with goitre.

Delayed Chloroform Poisoning.

As regards delayed chloroform poisoning, to which Dr. LEONARD G. GUTHRIE has called attention in our columns, believing that the deaths are in fact due to hepatic derangement of an antecedently fatty liver set up by chloroform inhalation, Mr. H. J. STILES and Dr. S. MCDONALD[6] are inclined to discredit the existence of any previous disease of the liver, considering that the degeneration is the direct result of the chloroform. The cases which they cite, as well as Dr. GUTHRIE'S, were those of children, but similar deaths of adults have been reported from Germany, the patients being the subjects of septic abdominal operations. It must be admitted that our knowledge of the pathology of the condition is at present far from complete. In this connexion the work of VON JAKSCH, LORENZ, BAGINSKY, and BECKER is of interest.

Diabetic Coma after Chloroform Inhalation.

The liability of diabetics to fatal coma after inhaling chloroform has been investigated by KAUSCH.[7] He finds ether to be safer and advocates the sodium treatment for some time before operation. He urges that the anæsthetic should be administered in the early morning after a prolonged fast.

Post-operative Jaundice.

SANTUCCI[8] has considered the germane subject of post-operative jaundice consequent upon the inhalation of chloroform. This may be fatal or slight. He is, however, inclined to believe that shock, fear, and pain felt in incomplete anæsthesia play a more important part than the anæsthetic since he has been able to collect cases in which jaundice developed, even although no general anæsthetic had been given, and in these one of the possible causes mentioned could be traced and probably determined the result.

Acetonuria after Anæsthesia.

Acetonuria after anæsthesia is the subject of a paper by Dr. E. G. BRACKETT[9] working in collaboration with Dr. J. S. STONE and Dr. H. C. LOW and the *résumé* which they give of the pathology of this curious condition is of no small value.

Albuminuria following Chloroform Inhalation.

DÉRÉMAUX and MINET[10] investigated the onset of albuminuria following chloroform inhalation. Of 50 patients, all free from albumin, they examined the urine from two hours

[2] Proceedings of the British Gynæcological Society, May, and THE LANCET, March 19th, 1904, p. 805.

[3] THE LANCET, Jan. 16th, 1904, p. 153.

[4] New York Medical Journal, August 27th.

[5] Johns Hopkins Hospital Bulletin, vol. xiv., p. 270.

[illegible] 1657.

[illegible] 27.

[illegible] 14.

[9] [illegible] July 7th.

[illegible]

to the second and third day after chloroformisation In 31 an appreciable amount of albumin appeared, in seven only a trace, while in 12 none could be detected The most in frequency and amount was met with among women and the quantity appeared to vary directly as the amount of chloroform taken and the length of the administration

Means of Resuscitation in Chloroform Poisoning

The view which many physiologists and surgeons have held with regard to the ineffectiveness of the methods of pulmonary ventilation in cases of chloroform poisoning has led to investigations upon the subject

Professor A E SCHAFER, F R S, in a report presented to the Royal Medical and Chirurgical Society, to which we have drawn attention in THE LANCET, stated that by the adoption of the prone position and the use of intermittent pressure upon the lower ribs a larger amount of air exchange could be obtained than by other methods, and Sir H DUNCAN LITTLEJOHN of Edinburgh confirms Professor SCHÄFER'S views Professor WOOD of Philadelphia relies upon perflation with a bellows, and Dr R C KEMP, to whose paper we refer below, insists that perflation with intubation of the larynx if practised with the patient in the head-down position will give the best chance of resuscitation A further plan, the invention of Dr RUDOLF LISENMENGER of Pisek, has been described in our columns [11]

Massage of the Heart in Chloroform Poisoning

The important subject of resuscitating patients poisoned by chloroform by massage of the heart has received much attention It is not commonly recognised that SCHIFF some 30 years ago originated what he called "artificial circulation" by a plan which essentially coincides with cardiac massage PRUSS thoracotomic method, although ingenious, did not attract so much attention as perhaps it deserved Dr SILK [12] has however, reported a successful case The method of grasping and rhythmically compressing the heart through the diaphragm, which Mr W ARBUTHNOT LANE practised in a case of suspension of the action of the heart under ether and which he recorded in our columns, has during the past year been adopted in several cases Professor W W KLEN [13] has reviewed the whole subject Out of 27 recorded cases 24 were failures The heart can be reached by the hand in the abdominal cavity, supposing the patient is the subject of a laparotomy or an incision can be made through the abdominal parietes and the diaphragm severed sufficiently to permit the fingers to seize the heart PRUSS'S [14] operation and WEHR'S [3] procedure are more severe and involve the risk of pneumothorax CHILE, whose valuable work on surgical shock and the emergencies of surgery has done so much to increase our knowledge, has pointed out that it is obviously a mistake to rely solely upon re establishment of cardiac movements—this must be supplemented by stimulation both of the vaso motor and the respiratory systems Dr KEMP and Dr A W GARDNER [16] have further elucidated the subject by an elaborate experimental research the results of which are novel and interesting Respiration was maintained by a Hoyt's pump and intubation and the three following methods were employed 1 Trephining the sternum and pressing the heart against the chest wall by the finger and thumb inserted in the trephine hole This plan, however is obviously impossible in man and the alternative of an incision in the supraclavicular region is too dangerous from the proximity of important structures 2 Resection of several ribs and the insertion of the hand The dangers of pneumothorax and damage to the pericardium are grave so that Dr KEMP and Dr GARDNER prefer (3) the method which is applicable to man and less beset with dangers The patient is placed in the Nélaton position, an incision is made over or below the apex, and a portion of the fifth and sixth ribs is resected if necessary The index and middle fingers are placed behind and the thumb between the apex and the chest wall, the heart is then squeezed rapidly and intermittently between them The injection of saline solution at 120° F is used if the heart is empty and flabby and the surface of the organ is kept warm by saline solution This temperature is important as although the blood heat in the vessels is 102° the solution cools rapidly before it enters the circulation In 11 cases out of 23 the animal was resuscitated, even although all movement of the heart had absolutely ceased and the animal was apparently dead All the other recognised methods of restoration had been tried before massage Intervals of time varying from three to 16 minutes were allowed to elapse before the massage was applied These experiments enforce the value of complete, as opposed to partial, inversion in such cases In conclusion, it is urged that massage of the heart is a justifiable and, indeed, a requisite procedure if other methods fail in threatened death from anæsthetics, from drowning, or kindred conditions

COHEN [17] records a case of a woman upon whom an operation for the removal of an ovarian cyst was in progress when respiration and circulation ceased after 15 minutes inhalation of chloroform The usual measures were tried and failed and so after two minutes one hand was placed over the præcordium and one was introduced into the abdominal cavity The heart was compressed at first at the rate of 60, then of 80 times in the minute In a minute the heart began to beat naturally and the operation was completed under ether BOUCHARD, who has devoted some time to the subject, regards the chances of recovery as good when subphrenic compression of the heart is practised His experiments went to show that while the thoracic operation was decidedly dangerous the subdiaphragmatic method failed in his cases mainly owing to the neglect of obvious precautions to which he draws attention, such as allowing liquid chloroform to enter the lungs, pressing the heart against a bronchus, all procedures easily avoided if care is taken. TUFFIER, D HALLUIN, and MANG have also published experiences of this method, although not successful EMIL KING [18] records successes with the less severe procedures of bimanual compression of the heart from without by the Konig Maas method D HALLUIN, [19] who believes in the practical value of massage of the heart, draws attention to the causes of the failure of the operation, such as ineffective artificial ventilation of the lungs, clotting in the vessels, and last, but most important, fibrillary contraction of the myocardium To prevent this BATELLI employs a current of 240 volts, placing one electrode in the rectum and the other on the ventricle

Other Methods of Resuscitation

The use of quinine taken some time before the anæsthetic will, one observer finds, do much to counteract the depression Perhaps no research more worthy of careful study has appeared for many years than that of CHILE [20] His conclusions, which he ably supports, are not in all respects in harmony with clinical experience Injections of strychnine, if the dose is small, are he considers, of little value and large doses exhaust the vaso motor centre, for this drug CHILE regards as a pure vaso motor stimulant Digitalis, nitro glycerine, alcohol, and stimulants in general

[11] THE LANCET Feb 20th, 1904 p 515
[12] Centralblatt für Chirurgie No 36
[13] Proceedings of the Philadelphia County Medical Society March 31st 1904
[14] Wiener Klinische Wochenschrift 1900 Nos 20 and 21
[15] Centralblatt für Chirurgie 1899 Beitrage p 74
[16] New York Medical Journal, May 7th and 14th, 1904, pp. 875 and 925

[17] Journal of th
[18]
[19] L
[20] Pract tioner August, 1 ... 24th, 1904

are, he believes, valueless, the only useful way of counteracting shock being the infusion of saline solution and the use of some means of influencing the circulation such as the indiarubber suit which he has invented. This tends to direct the blood mass back to the centres. Suprarenal extract when injected intravenously produces a rise of blood pressure but as this is very transient it is, the hinks, of little value. He also points out that the increased muscular tonus following the injection of large doses of strychnine may cause grave inconvenience and promote venous bleeding.

Ether.

The subject of the changes in blood brought about by the inhalation of ether has received much attention. Recently Dr. J. M. ANDERS and Dr. L. N. BOSTON of Philadelphia have undertaken a research, both the lower animals and man being investigated. Hæmoglobin is markedly lessened in the first 24 hours, the greatest loss occurring immediately after the inhalation and in direct proportion to its length. Slight changes in the red corpuscles and leucocytosis are recorded. Hæmolysis and the other changes noted were rapidly recovered from after the inhalation was discontinued. An important research on post-operative pneumonia when ether is employed has been undertaken by Dr. W. L. CHAPMAN.[21] He believes that the violent inspirations common in ether anæsthesia lead to aspiration of pathogenic germs into the lungs and these, if they find a suitable soil in the respiratory system, multiply and give rise to pathological changes. He gave ether to rabbits and found that râles rapidly appeared but if the ether was carefully given there were no marked changes in the lung tissues; if it was "pushed" congestion and intra-alveolar hæmorrhage appeared. Other rabbits breathed an atmosphere containing diplococci pneumoniæ. These showed some lassitude for three days but no exudation, peribronchitis, or changes other than slight thickening of the alveolar walls. When, however, the diplococci were presented to etherised rabbits the animals became ill, refused food, and breathed rapidly; no dulness or râles appeared but all degrees of pneumonitis with exudation and peribronchitis. In other rabbits he injected ether into the lung tissue; no anæsthesia resulted but there rapidly appeared consolidation, destruction of tissue, dulness, and diminished movement. The teaching of these experiments is clearly that wards, operating rooms, and operating theatres should have pure air and that patients whose lungs are not certainly normal should not take ether. Dr. CHAPMAN also insists on the importance of purification of the mouth.

Chloride of Ethyl.

A very large number of papers dealing with this anæsthetic have appeared and nearly as numerous have been the suggestions for special inhalers. Our columns have depicted many such inhalers so that it will be unnecessary to dwell upon the subject beyond remarking that the simpler the apparatus employed, provided complete exclusion of air can be practised, the better. GAUDIANI[22] gives an excellent *résumé* of the subject. He employs this anæsthetic alone or follows its use with ether or chloroform. He has caused alcoholics, persons with albuminuria, with heart disease, or with bronchitis to inhale chloride of ethyl and has had no serious difficulties, although he regards both it and bromide of ethyl as undesirable in the case of alcoholics. The only dangerous symptom which he has noticed has been an occasional brief paralysis of respiration without appreciable interference with the circulation. Dr. ERDMANN[23] of New York and other writers agree as to the safety and many valuable properties of chloride of ethyl and its superiority over bromide of ethyl and mixtures containing that drug, but they point out that for operations requiring muscular relaxation chloride of ethyl is unsuitable. Mr. A. L. FLEMMING[24] contributes some information concerning the physiological action of this body. In overdoses he observed pallor, widely dilated pupils, cessation of respiration, flaccidity of the limbs, and loss of radial pulse, but he found that artificial respiration at once restored animation. In the blood of cats killed with chloride of ethyl he found absorption bands resembling those of carbon monoxide. The dendrites when the brain was examined were varicose and in many cases had lost gemmules.

Local Analgesia.

Although many papers have been written and much discussion has taken place little that is new can be recorded. BRAUN'S suggestion of adding adrenalin to cocaine in SCHLEICH'S and OBERST'S methods of infiltration has been very thoroughly tried and in cases suitable for local analgesia as opposed to general anæsthesia it has proved very successful. Excellent *résumés* of recent work on spinal analgesia have been contributed by Dr. W. J. MCCARDIE.[25] The method, however, appears to find fewer advocates than it did upon its first introduction.

THE MIRROR OF HOSPITAL PRACTICE.

The cases shown in the Mirror of Hospital Practice are representative of the treatment pursued in the chief hospitals both at home and abroad and so they may serve as a true reflection of hospital practice at the present time. Of the many interesting cases recorded we select a few of the more important.

Intracranial Hæmatoma.

Several good examples of cranial and cerebral surgery have been recorded. Mr. C. W. MANSELL MOULLIN had under his care at the London Hospital a man, aged 26 years, who was admitted comatose. He had been thrown from a motor car in a collision but on examination no evidence of injury could be found though the unconsciousness was complete. Later in the day he became conscious but was drowsy. On the next day the temperature rose to 101·4° F. and vomiting occurred but no localising symptoms were present. On the fourth day after admission it was noticed that a subconjunctival ecchymosis of the right eye was present. On the next day twitchings of the left limbs and of the left side of the face occurred at intervals and again on the sixth day and paresis of the left side of the face and paralysis of the left arm and leg came on. He was trephined over the right face area but no fracture was found and no extradural hæmorrhage. On incision of the dura mater a large clot was seen and the source of the hæmorrhage was plugged, as it could not be controlled with pressure forceps. Six days later the paralysis began to diminish and the improvement continued until he was able to walk when he left the hospital a month later. In this case the hæmorrhage from intracranial vessels was the effect of an external injury which left no external mark and the delay in the appearance of severe symptoms was remarkable.

A very similar case was in the Royal Devon and Exeter Hospital under the care of Mr. J. DELPRATT HARRIS. A man, aged 62 years, was knocked down and rendered insensible by a stone falling on the top of his head. Though stunned for a short time he was able to walk home. For a fortnight he complained of little more than the bruising and loss of sleep, but then he became somewhat weak in intellect, nervous, and suspicious. The left arm was wasted, as were also both the legs, especially the right; both legs were rigid. The patient was trephined over the right side, a large subarachnoid clot was

[21] Annals of Surgery vol. xxxix., p. 700.
[22] Répertoire de Medecine, Jan. 29th
[23] Medical News, New York, May 28th.
[24] Bristol Medico-Chirurgical Journal, September, 1904.
[25] Birmingham Medical Review, February and March.

found, and some four ounces of altered blood clot and serum were evacuated Some improvement followed but a week later, after a second operation at which more clot was removed, permanent improvement began and he left the hospital well about three months after admission In this case the delay in the appearance of symptoms was even longer than in the previous case

Jacksonian Epilepsy

An interesting example of Jacksonian epilepsy in which there was no history of injury was under the care of Dr THOMAS OLIVER and Mr W G RICHARDSON in the Newcastle Royal Infirmary The patient was a man, aged 30 years, and according to his history he had had severe headache in the left fronto parietal region for six months Ten days before admission he had a "fit" and on regaining consciousness he found that he had completely lost power in his right arm These fits came on more and more frequently until they recurred every ten minutes, each fit lasted for about three-quarters of a minute and involved the right limbs and the right side of the face Mr RICHARDSON trephined over the left motor area and it was found that the dura mater was attached to the brain towards the hinder part of the opening and it could not be freed without tearing the brain substance The patient after a temporary rise of temperature did well till the following morning when he died comatose At the necropsy the dura mater was found to be firmly adherent to the brain over an area of two square inches in diameter at the posterior part of the left Rolandic area and the brain substance was œdematous

Hernia Cerebri

The treatment of hernia cerebri varies somewhat It is usually considered at the present time that it is better not to remove the protruded mass but to apply antiseptics We have published a case in which this treatment was followed under the care of Mr R T H BUCKNALL The patient, a boy, aged 16 years, had a compound fracture of the skull, followed by septic meningitis, Recovery followed the treatment adopted, which consisted in opening up and cleansing the wound, but a hernia cerebri developed and this also disappeared under the treatment mentioned above This case is remarkable in that recovery followed though septic meningitis was present In a case, however, under the care of the late Mr A QUARRY SILCOCK absolute alcohol had no effect on a hernia cerebri which appeared in a girl, aged ten years, after a compound depressed fracture Pure carbolic acid and the pressure of a leaden plate were also equally useless The mass was twice removed and after the second operation the wound began to heal The removed masses were found to contain white brain matter as well as granulation tissue

Bronchiectasis

Dr A T DAVIES has had under his care at the Metropolitan Hospital a man aged 32 years who for ten days before admission had had cough and profuse expectoration His respirations were 40 to the minute and when moved for any reason he brought up large quantities of fœtid muco purulent material A portion of the fifth rib was resected in the mid axillary line, the pleural cavity was found to be obliterated, and a small opening was made into a large cavity in the lung substance and nearly a pint of pus was removed At a subsequent operation a large drainage tube was inserted Rapid improvement followed and he recovered, only a small sinus remaining The exact nature of the cavity was not certain but it was probably bronchiectatic

Death after Exploratory Puncture of the Chest

Dr THOMAS OLIVER has recorded two cases in which death followed an exploratory puncture of the chest A considerable number of such cases is now known and it is clear that the fatal result in most of them is the effect of the puncture Dr OLIVER suggests that the death is due to direct stimulation of some of the pulmonary branches of the vagus, producing both cardiac and respiratory inhibition, in some of the cases in which death follows some hours or a day or two after the puncture the vaso motor centre may be also affected and pulmonary œdema may result Dr OLIVER advises that in exploratory punctures the patient should never be in the sitting posture and that a little brandy should be administered shortly before the operation

Intrapericardial Rupture of the Inferior Vena Cava

Mr J McW BOURNE has published a very rare case of a man, aged 60 years who fell suddenly while walking in the street and died a few minutes later At the post mortem examination it was found that a perforation had occurred in the intrapericardial portion of the inferior vena cava and the pericardium was full of blood The perforation seemed to have been produced by an ulcer like destruction of the vessel's wall

Diaphragmatic Hernia

A rare variety of diaphragmatic hernia was discovered at the necropsy in a patient, aged two years, who had been under the care of Dr LUSHER SMITH for broncho pneumonia Behind the liver and immediately to the right of the œsophagus was a hernial sac formed by the stretched tendon of the diaphragm The sac contained about half the stomach, including the cardiac and pyloric orifices There were no adhesions and the hernia was readily reduced

Richter's Hernia

Partial enterocele or Richter's hernia is the condition in which only a part of the circumference of the bowel is involved in the hernial orifice The fact that the onset of the condition is very gradual is well illustrated by two cases recorded by Mr W LOW They both occurred in women and in both perforation and peritonitis had occurred and the bowel had withdrawn from the sac The first patient died in spite of operation and drainage but the second recovered Resection was not required In both cases Mr LOW remarked the absence of collapse on admission

Fatal Uræmia in an Infant

Dr F G PENROSE has published a case of uræmic convulsions in a child, aged one month, which ended in death At the necropsy septic pyelitis and nephritis were found with extensive dilatation of the ureters and the starting point of the whole disease appeared to be a very tight phimosis

Tetanus

We have published a number of cases of tetanus and the treatment has varied greatly but in most of the cases the tetanus antitoxin was employed Curare has been used in one series of cases The results of the treatment of tetanus are not, however satisfactory, for the proportion of recoveries of untreated cases is large enough to invalidate the statistics as at present compiled Long series of cases under the various methods of treatment are needed before any definite opinion can be expressed as to their value

CHEMISTRY

The discovery of radium has given the world of physical and chemical science a new theme and probably on this account the usual pursuit of synthetic processes and the study of ordinary facts in inorganic and organic chemistry have been less fruitful than has been the case in previous years The search for new elements has been ruthlessly turned aside by the astounding discovery that the radium emanation disappears only to reappear as a new element All other investigations compared with this have appeared insipid and the attempt to isolate new elements is, only for a time we may hope, abandoned because of the promise of gaining an insight into the formation of element from element The temptation to be able, so to speak, to create rather than

to find is naturally intense. By the discovery of radium a wonderful star, as it were, has appeared above the horizon and the telescopes of all observers are turned upon it, while the apparently less brilliant stars are left to pursue their onward course without any important observation being directed to them. In the annals of chemical science there was never a more interesting period than the present moment and the chemist's power of penetrating into, and interpreting, facts is severely taxed by the discovery of a body the organisation of which is so high that it easily breaks up into elements on a lower plane than itself. Life is never still and all its processes imply change, but few would have ventured a decade ago to suggest that the same is true of the inorganic world, that after all there is an activity akin to life in the so-called inorganic elements. It has been shown that a remarkable analogy exists between the action of enzymes and of metals in the colloidal state, and so much so as to have given rise to the description of the latter as inorganic ferments. If the metals platinum, gold, silver, cadmium, and iridium, for example, are reduced to such a fine state of division that they remain suspended in the water in the form of a solution—that is, of a colloidal solution—they bring about changes when in contact with other substances which closely resemble the changes due to the action of an enzyme. A colloidal solution of platinum accelerates the oxidation of alcohol to acetic acid and finely divided iridium will decompose calcium formate into calcium carbonate, carbon dioxide, and hydrogen in the same way as do certain organisms. Further finely divided metal will effect the inversion of cane sugar and colloidal solutions in the same way will decompose peroxide of hydrogen after the manner of the enzymes in the blood. Perhaps, however, the most remarkable thing of all is that this action of metals in colloidal solution is retarded by the presence of strong poisons. In this way the colloidal solutions of the metals behave exactly like the enzymes of the blood. The action of the ordinary enzymes is very readily interfered with by the presence of certain poisons and, strange as it may appear, it would seem to be possible to poison, so to speak, the finely divided metals in a similar way. Colloidal platinum, for example, readily decomposes peroxide of hydrogen in the same way as does blood but the action almost ceases when sulphuretted hydrogen, iodine, mercuric chloride, or some other well-known poisonous substance is present. Compare with this the wonderful experiments of Professor J. C. BOSE concerning the response of matter and a doubt is raised as to whether after all we can maintain that there is any precise line dividing the animal from the plant, the vegetable from the mineral, the animate from the inanimate. In a word, no kind of matter is dead. It is only dead in the light of man's necessarily brief period of observation. Given time enough and the world's store of gold, for aught we know, may become copper. Disintegration is probably common to all, though its rate must in most cases be very slow and must vary with each element. Radium changes rapidly enough to come within our observation in quite a short time and in tubes containing the emanating substance helium sooner or later appears where no helium was. The disposition of the elements on the earth may be dependent on this process of disintegration, which would account for the greater abundance of some elements than others. The atom can be held to be no longer as always a stable entity. There is the disintegrating atom and the non-disintegrating atom which may exist side by side in the same sphere. The atom is a mass of electrons, some of which may break away to form new groups, and the electrons are units of electricity. "Matter," said Mr. BALFOUR in a characteristically subtle phrase in his presidential address to the British Association for the Advancement of Science at Cambridge, "is not merely explained but explained away" by such a hypothesis. On the other hand, the great Russian chemist MENDELÉEFF, who was the first to perceive the beauty, order, and importance of the periodic law of the chemical elements, is opposed to the conception of the division of the atoms into swarms of electrical units and holds that the ether itself is a gas and that therefore we "do not require the recognition of a peculiar fourth state of matter beyond the human understanding" and "all mystical spiritual ideas about ether disappear." Radio-activity in the light of this theory becomes a kind of absorption phenomenon, elements of high atomic weight having a high attractive capacity for the attenuated gaseous element ether which, in being absorbed, may undergo a change of state exhibiting during the transition such phenomena of light as fluorescence and radio-activity. Chemists and physicists may well feel excited when they think of the future developments to which the discovery of radium may give rise, but in spite of all this brilliant progress it seems improbable after all that the whole truth of the nature of things will ever be known by man, for however glowing discovery after discovery made by him may appear to be, each only serves to widen the field of speculation. But the lifting of only part of the veil is to the pursuer of truth a joy, besides being a tribute to his mental endowment and a proof of higher things.

THE NAVAL AND MILITARY MEDICAL SERVICES.

The year 1904 has been a very notable one as regards the navy and the army and their medical services. It has been unusually full of important subjects and changes calling for consideration and inviting comment. Many of these have been of so comprehensive and mixed a nature as to overlap one another and not to admit of their being circumscribed within the limits ordinarily assigned to medical services, while the end of the year still finds us in the throes of a wholesale radical reorganisation and reconstruction of our military services both in this country and in its great Indian dependency. At the same time a terrible struggle for supremacy going on between Russia and Japan in the Far East demands our attention, both because of the lessons to be drawn from the successes and the failures of the combatants and because of the international complications which may possibly arise.

The Lessons to be Derived from the South African and the Russo-Japanese Wars.

Our late war in South Africa taught this nation a severe lesson and the subsequent publication of the report of the Royal Commission thereon proved a rude awakening from the self-complacency into which the nation had fallen. This report, as might have been confidently expected, roused the public and the Government to action. It was speedily followed by other official inquiries and by reports setting forth the results arrived at together with various proposals of a more or less radical kind affecting our whole military system and method of procedure. It was the opinion of the ablest officials and experts on Lord ESHER'S Reconstruction Committee, for example, that the adoption of their recommendations was absolutely necessary for the purpose of increasing the efficiency of our land and sea forces and safeguarding the empire in time of war. These recommendations, so far as the reconstruction of the War Office system is concerned, have in the main been carried out and even amplified. The Prime Minister, as president of the Defence Committee, will know all that is taking place, with the result, it may be hoped, that our diplomatic action will not in future altogether outstrip our war arrangements for giving effect to it.

With all the shortcomings disclosed during the Boer campaign it must nevertheless not be forgotten that that war had the effect of binding together this country and her colonies in a way that probably nothing else would have brought about and at the same time of opening out a

prospect to some future statesman for devising a comprehensive scheme of Imperial defence which shall include as an integral part of it an Imperial medical service Nor is this a small or merely theoretical matter, for we have only to take the war now going on in the Far East as an object lesson for our instruction to see how utterly inadequate would be our British medical service at the present time, even with all the aids that could be added to it from Red Cross Societies and civilian sources, to cope with such conditions as have arisen in Manchuria and at Port Arthur The great numerical strength of the armies engaged, the distances covered by them, the rapid succession of big battles, with the enormous number of casualties which have occurred have been such that no medical organisation that has been yet devised could even inadequately cope with them However much the public our statesmen, or our military authorities may for the present close their eyes to the facts they will have to open them to our unpreparedness and shortcomings in this respect should it fall to our lot to be engaged in some really big war We therefore regard the task which "The Central British Red Cross Council" has set itself to accomplish—namely the extension, development, unification, and organisation of voluntary and resources of this country throughout the empire on a scale commensurate with its requirements—as a very necessary step in the right direction, and to carry it out with any chance of success all the necessary arrangements must be preconcerted and systematised beforehand in time of peace and not under the sudden emergencies of war

The Position of the Medical Services, especially in War

It is an old but disregarded truism that every increase in national power and trust is invariably accompanied by an even more than corresponding increase of responsibility Unless the word Empire is to be used as a mere geographical expression it must imply some common unity of design and purpose No military system which does not include powers of expansion outside the limits of the regular forces of the Crown can be considered satisfactory We regard the position and responsibility of the medical services as of great and growing importance and we wish that we could honestly affirm that we were altogether satisfied with their present or prospective condition and with the official position which has been assigned to the Director General of the Army Medical Service under Mr ARNOLD FORSTER'S new *regime* There has been a great deal of doing and undoing in respect of the Army Medical Services during the last two years Mr BRODRICK, on his quitting office, had placed the head and representative of the department in a position at the War Office where his counsel and representations would have insured due attention and respect and where he could have been of real use to the army at large But this as it seems to us, is no longer to be the case, the Director General and the Army Medical Service are henceforth to form one of a group of departments under the adjutant general, and instead of being a member of the War Council the Director General can be summoned "whenever his advice and special knowledge are required'—a very different and altogether subordinate position to that proposed to be accorded to him by Mr ARNOLD FORSTER'S predecessor in office We called attention to this subject in a leading article[1] and subsequently in several paragraphs in our "Services" columns No adjutant general has the necessary technical knowledge to make him a judge in matters of army hygiene, hospital requirements and administration, causes of army disease or their prevention, and still less in those of a surgical and medical kind, and even if he had he has no more fixed continuity of office than has any War Minister for the time being Experience in the past of the subordination of the medical department to a system of purely military control has not, it seems to us, been such as to render continuation of such a system desirable in the interest of the army or of its medical service How best to preserve the health and efficiency of armies in the field and to provide for the sick and wounded in war is becoming a more and more urgent and important problem The Director General of the future will have to be an unusually able and independent man, he must have army experience, business qualifications, initiative, readiness to advocate bold and comprehensive measures where these are in his judgment necessary, and he also needs to have an alert and broad appreciation of the scientific side of his profession Can it be said that all the occupants of that post have been men of that stamp or that some of those who have been promoted to it since the Crimean war owing to their strong military interest have possessed such qualifications as these for the office?

Surgeon General Sir W D Wilson's Report on the South African War

The official report on the medical arrangements in the South African war by the late principal medical officer of the South African Field Force Surgeon General Sir W D WILSON K C M G, the publication of which had been anxiously awaited, made its appearance towards the end of the year in time to enable us to outline its scope[2] The lapse of time that has taken place since the occurrence of the deplorable epidemic of enteric fever at Bloemfontein and indeed, since the end of the war is not perhaps to be regretted for it has enabled Surgeon General WILSON to mature his opinions and to produce a very complete, trustworthy, and instructive report

The Journal of the Royal Army Medical Corps

This journal has more than entered on its second year of existence It manages to maintain a scientific tone and an up to date standard in addition to being a good organ of departmental news, although, as might be expected, its monthly numbers vary in the quality and interest of their contents

The late Surgeon General Jameson, A M S

We must not omit to notice here the death of Director General JAMES JAMESON[3] which occurred at Eltham somewhat unexpectedly on Sept 13th, to the grief of his many friends and sympathisers The late Director General had a very trying and onerous time in his post during the South African war and we cannot account for all the circumstances attending his retirement or for the fact that his strenuous efforts received no official recognition It will be remembered that his retirement was the occasion of evoking a strong feeling of sympathy with him, not only on the part of his departmental officers, but on that of the whole medical profession also, and that this found expression at the public dinner accorded to him at the time

The Post of Director General A M S

The late Director General's term of office is supposed to have expired on Dec 1st last but no successor to Sir WILLIAM TAYLOR was appointed until just before Christmas when Lieutenant Colonel (temporary Surgeon General) ALFRED H KEOGH, M D, C B, was nominated for the post Surgeon-General KEOGH is to be congratulated upon his selection as official head of his service All who know anything about recent developments in the department know that he is responsible for much sound administrative work, while his service record is a good one The appointment of Surgeon-General KEOGH over the heads of many seniors marks a new departure and may be expected to give rise to comment.

[1] THE LANCET, Feb. 27th, 1904, p 583

[2] THE LANCET Dec 17th 1904 p 1729

[3] See THE LANCET, Sept 24th, 1904 p 925.

The War in the Far East.

Ever since the outbreak of hostilities between Russia and Japan in their struggle for supremacy the eyes of the civilised world have been anxiously turned to the Far East. The war has been regarded and discussed from every possible point of view—political, military, medical, and psychological. With regard to the last-named aspect we may note that an explanation of Russia's military strength has been sought for in the inertia of temperament of her soldiers rendering them stolidly resolute, enduring, panic-proof, and always amenable to discipline. The intense patriotism of the Japanese, on the other hand, is beyond dispute and they are enterprising, intelligent, and fearless. Probably no soldiers have ever reached a higher average standard of fighting determination than is to be found in the Japanese army. Added to this the Japanese capacity for organisation, as shown in all their army arrangements and notably so in their field hospital and transport arrangements, their mastery and adjustment of details to practical war purposes, and their tactical ability in the field have also to be taken into account. Whether their generals are also endowed with the requisite power of imagination to conceive and to execute some big and bold strategical scheme has perhaps yet to be proved. It would be impossible within any reasonable limits to deal with the origin and history of this war. Nor is there any need to do so, for the lay press has from its commencement up to the present time kept the reading world informed of what has taken place. As regards its medical history and aspects we may refer the reader to the weekly series of articles that have appeared in our "Services" column, wherein they will find a summary statement of the very scanty information available together with some accompanying comments.

The medical and hospital organisation and sick transport of both belligerents have necessarily been upon a very big scale and largely augmented by their respective Red Cross societies and other philanthropic agencies. The Russian Red Cross Society possesses large resources and great influence in high quarters and forms, numerically speaking, a very large and strong body; still, it has proved inadequate to the requirements of this war. It is hard to realise what must be the deplorable condition of the armies in Manchuria—and especially as regards that of Russia—at the present time, considering that all the available sources of water-supply are frozen and that the ice, for horses and troops alike, has to be thawed and that there is said to be a scanty supply of fuel.

To provision an enormous army like that which General KUROPATKIN commands during the winter, with all that is required to maintain it in health and fighting efficiency, to say nothing of warlike stores and ammunition or of the transport of the sick and wounded along the Siberian railway, is obviously, in all the circumstances of the case, a stupendous undertaking and one attended with increasing difficulties.

The Medical Service of the Royal Navy.

There have been great and important changes in the Royal Navy during the past year, the end and aim of which have been to strengthen the fleet as an instrument for war, while at the same time reducing the cost of naval defence. The navy has not, however, been cast, like the army, into the "melting pot," which, according to a speech of a military member of the Army Council, had been the fate of the latter service. But these changes, which are generally regarded as good and needful, do not come within the purview of the medical journalist. How far the new scheme for the strategic and more economical distribution of the fleet may have any effect on the naval medical service remains to be seen. There is one thing, however, which we must not omit to notice, because it promises to be of great mutual advantage to both services—the navy and army alike. It is that they will act more together and more preconcertedly in the future than in the past in settling their arrangements and line of action in time of war. This will clearly be of much mutual benefit to the medical departments of both services. We may fairly congratulate the Admiralty and its medical service on possessing an eminently healthy navy. In the last published annual report (for 1903) it is stated that the total death-rate was 4·19 per 1000, which is the lowest recorded since 1856—nearly half a century ago. The death-rate from disease alone was only 2·79, which is somewhat less than the previous year.[4] Sir HENRY F. NORBURY, K.C.B., retired from the post of Director-General during the year and Inspector-General of Hospitals and Fleets H. M. ELLIS was selected to succeed him. The selection was, in the opinion of the Royal Navy Medical Service, the best that could be made and we had at the time of his appointment the pleasure of congratulating him and wishing him all success in the discharge of his new and responsible duties.

The very important question as to the best medical arrangements that can be made for a serious naval engagement, which is one of a difficult and complex kind, has not been lost sight of, but does not seem yet to have been settled finally. Whilst upon this subject, and considering how many points of a hygienic nature may arise and have to be determined in connexion with naval construction, we think that the Board of Admiralty might avail itself more than it now does apparently of the aid and experience of the Royal Navy Medical Service.

India and the Indian Medical Service.

Speaking generally, it may be said that our Special Correspondent in India has kept our readers *au courant* with the progress of events connected with the public health of that country and the history of its medical service. The more prominent diseases that have prevailed in India during 1904 have been such as usually occur there: fevers of various kinds, but mainly malarial among the native population and enteric fever as a cause of mortality among Europeans; diarrhœa and dysentery; plague continues its ravages, showing periods of fluctuation according to seasons favourable or not to its prevalence; and cholera to no great extent or of any epidemic intensity. It may be mentioned here that there has been a decreasing prevalence of cholera among British troops serving in India of late years. We no longer hear of those terrible epidemics which occurred in the past. It is probable that improved systems of water-supply and sanitation have greatly helped to bring this about. But it cannot be said that our efforts in respect of the prevalence of enteric fever have been attended with success: it still continues to be the scourge of our young soldiers serving in India. The latest report of the Sanitary Commissioner of India states that 29 per cent. of the mortality of the Indian European army is due to enteric fever.

Anti-malarial Operations.

We may here parenthetically remark that the difficulties to be grappled with in India in the way of anti-malarial operations, so successfully carried out elsewhere, are immense. It will be remembered that at the instigation of the Royal Society's Malarial Commissioners some anti-mosquito measures were undertaken at Mian Mir. The Sanitary Commissioner with the Government of India, in his last report, considered that the experiment as a practical means of combating malaria in that cantonment had not proved so successful as had been anticipated. Such stations as Mian Mir, it may be added, are not at all well adapted to the purpose of carrying out an experiment of this kind.

[4] THE LANCET, Dec. 17th, 1904, p. 1740.

Imperial Sanitary Commissioner and Sanitary Department for India

Several changes affecting the Indian Medical Service have taken place during the year under review But by far the most important, because it promises to be the beginning of a comprehensive and salutary administrative reform, is the recent resolution in the Home Department of the Government of India dealing with the creation of the post of an Imperial Sanitary Commissioner and the organisation of a new sanitary department for India, which is to be altogether separate and independent of the Director General of the Indian Medical Service In connexion with this department there will be a central laboratory at headquarters and a provincial laboratory in each of the larger provinces If this is to be taken as an instalment of what is to follow it is a new departure which promises eventually to become an administrative reform of the first magnitude As a public health measure it is assuredly a step in the right direction and one which, if only in the interest of scientific medicine, we have long desired to see brought about The resolution setting forth the decision of the Indian Government gives a long and interesting historical review of the sanitary organisation of India It briefly records the various attempts which have been taken officially in the past to keep pace with the progressive requirements of public health Owing to the fundamental changes which have been brought about by bacteriological and other methods of scientific research sanitary science has everywhere become a more and more specialised study and the Government of India recognises that the time has arrived for new and radical changes to be made in the sanitary department of British India in order to render it a more efficient instrument for dealing scientifically with the numerous public health problems which are constantly arising there There is no country where the provision of fully equipped institutes for the study of these problems is more needed than in India and the fact that plague has apparently secured a firm footing there affords an additional reason and an opportune time to carry out such provision. Major J. T W LISTER, I M S, with the sanction of the Secretary of State for India, has been appointed to the newly constituted post of Imperial Sanitary Commissioner. His office, as we have said, is to be distinct from, and independent of, that of the Director General of the Indian Medical Service The head of the new sanitary department will give his whole time to the work, his position with regard to provincial governments will be consultative rather than authoritative, and the most responsible part of his duties will primarily consist in the organisation and direction of research throughout India in connexion with the central and provincial laboratories about to be established "For research," as our Special Correspondent in India remarks, "all seems well, but for the carrying out of more practical sanitary work we are not yet vouchsafed any scheme" In our article on Sanitation in India[5] it will be seen that we have alluded to the fact that the great difficulty in Indian sanitary administration, especially in so far as its native populations are concerned, arises not so much from want of knowing what to do as practically how to do it or to obtain the money and men to get it done The Indian Government apparently desires to adopt a slow, tentative, and cautious method of procedure instead of at once putting forward some fixed and precise policy in its new scheme, in order to gain time and to benefit by the results of the experience acquired in carrying out its sanitary reforms

Remuneration of Civil Surgeons in India

We must not omit to notice a matter which materially concerns officers of the Indian Medical Service—namely, a notification of the Governor General in Council regarding the remuneration of medical officers for attendance on native chiefs, nobles, and native gentlemen of high position in a native State It is difficult to see what reasons determined the Government to exercise this interference with the private practice of civil surgeons in India No reasons have been assigned, but the new order is naturally resented by Indian medical officers and is little calculated to sustain the estimation in which the service has always hitherto been held by the natives of India We trust the coming year will see the rescission of this order

The Mission to Tibet

India has been comparatively, if not entirely, free in 1904 from any of her small but troublesome wars The mission to Tibet was of an interesting and novel, but nevertheless of a very trying, character owing to the geographical obstacles that had to be overcome and the diversities of climate that had to be encountered The observations on the physiological effect of high altitudes on men and animals formed an interesting feature The military force accompanying Colonel YOUNGHUSBAND on the march to Lhasa had an experience—especially in the return march in a blizzard, when several native soldiers suffered from snow blindness and had to be led along the route—which it would probably not care to repeat under similar conditions Lieutenant Colonel L A. WADDELL, I M S, C I E, who was chief medical officer to the expedition and is familiar with the Tibet country and its people, is about to publish an account of the mission dealing especially with its medical aspects

PUBLIC HEALTH.

The progress of knowledge and of administrative action does not follow so precisely the movements of the earth around the sun as to enable us at the end of each year to indicate with mathematical accuracy the advances made in any one direction This is especially true of public health which is intimately bound up with the social progress of the people In fact, public health properly interpreted is in a large part a record of the general material advance of the poorer classes Although between Jan 1st and Dec 31st, 1904, there have been no startling discoveries and practically no legislative advance in matters appertaining to preventive medicine there has nevertheless been a steady progress in certain directions This progress has in a sense taken the shape of a modification of some of the views previously held and in so far as such modification of ideas may be in the direction of a nearer approach to truth it may fairly be regarded as progress, although in some respects the progress amounts to a reversal of former ideas and policies Questions are being raised as to whether some of the alleged panaceas of the past are really supported by a sufficient array of facts and figures to justify their retention in the machinery of preventive medicine, and it is well that all honest criticism should be fairly and freely discussed What appears to us to be taking place more and more every year is a growing recognition of the fact that our former conceptions of public health have been too restricted, that we have confined ourselves too exclusively to attacking a few diseases only, whereas we are now beginning to see that other diseases than those which are infectious are perhaps even more amenable to attack Probably this conception has received a considerable stimulus during the past year by the prominence which has been given in the medical and the lay press to the question of

The Physical Deterioration of the People

In our last Annus Medicus we ventured to predict that if this alleged deterioration was established by the Privy Council Committee which was appointed to consider it and if notwithstanding better housing, shorter hours, and better conditions of labour, and of greater purity of soil, water, and air, degeneration was proceeding apace "the whole policy of

[5] Vide THE LANCET, Oct. 22nd, 1904, p. 1168

our public health administration and of our social conditions generally would need to be committed to the melting pot of searching criticism." We hinted, however, that the whole allegation with respect to deterioration which was based on facts as regards recruiting might be found to rest upon a misconception and that "what we are witnessing may be merely one of the effects of the improved well-being of the people and of the greater attractions offered to the workers by civil employment." Fortunately, the report of the Privy Council Committee has in large part confirmed our suspicions and there would appear to be no grounds for assuming, so far as any evidence is forthcoming in this respect, that our public health administration is on the wrong lines. Rather would it appear to be accepted that the forces engaged are the right ones but that they need to be employed with greater vigour. As we dealt very fully with this Privy Council report in a series of special articles which were published in our columns on August 6th and 20th and Sept. 10th it is unnecessary to revert to it at any length at the present moment. It may, however, be re-stated that the committee found the grounds upon which the allegations had been made to be insufficiently supported by the facts adduced; indeed, it found that one of the most pressing necessities of the problem was the acquirement of anthropometric data upon which some conclusions might in the future be based. The committee recommended that a permanent anthropometric survey should be organised and that in the first place attention should be directed to the periodical measurement of school children, as in the view of the committee "the main attack should be upon the youth of the country." It would not be untrue to say that the whole of the recommendations are directed to stimulating into increased activity and initiative the potentialities of public health and the committee think that the Local Government Board would derive great assistance from the creation of an "advisory council." Although the committee fully realises the devolutionary tendencies of modern days it insists strongly upon the immense importance to the national health of a central department which shall have ample power to deal vigorously with backward sanitary authorities. The influences which operate during infancy and childhood are those to which, in the opinion of the committee, most attention should be directed. The wastage of human life which is occasioned by our persistently high infantile mortality is evidently a subject to which the greatest attention should be paid and it is of interest to note how progress in another direction is bringing influences to bear upon this very point.

The Teaching of Hygiene in Schools and the Physical Training of Children

constitute a subject which has made enormous advances during 1904. The legislation which has handed over the teaching of children to our sanitary authorities is, in our view, not unlikely to prove the means by which, degeneration or no degeneration, the physical welfare of the children of to-day and of the mothers and fathers of the future will become materially enhanced. On all sides we hear that the teaching of hygiene to school children is being taken up and equally on all sides we hear of the physical training of the children. The diffusion of a general knowledge of the way to live amongst the poorer classes of the population will, we think, prove the charter of the people's physical salvation and it should, too, tend after some years to make the differences between the infantile mortality of the upper and the lower classes less pronounced than is the case at the present time.

Tuberculosis.

In the direction of the control of tuberculosis certain administrative advances have been made. An increasing number of sanitary authorities have obtained the consent of the Local Government Board to the voluntary notification of pulmonary tuberculosis and in some of these instances wholesome measures, such as instruction of the patients in necessary precautions and the periodical cleansing and disinfection of invaded houses, have followed. But generally there has been some abatement of the rather unbalanced enthusiasm which prevailed two or three years ago. There is, in fact, a sort of "marking-time" attitude and medical officers of health are reflecting as to whether, after all, a chronic disease from which a large section of the population are suffering in one or another form can be best attacked by the methods and machinery directed against the more acute exanthemata which last at most for a few weeks only. This hesitation seems to be justified by the consideration that our efforts to attack directly some of the infectious diseases have not been uniformly crowned with success and a little more study of the subject seems desirable before the country is asked to launch out in the general provision of expensive sanatoriums costing even as much as from £700 to £1000 a bed. But notwithstanding this hesitancy progress has been made in the provision of sanatoriums during the year. Some have been, or are being, erected on economical lines; others on more expensive lines. As regards the first group, the erection of a sanatorium for the tuberculous sick of Cumberland may be mentioned, as also the sanatorium at Winsley, near Bath, for the tuberculous subjects in the three counties of Gloucestershire, Wiltshire, and Somersetshire, while as regards the latter we may refer to the Brompton Hospital sanatorium at Heatherside, Camberley, Surrey, and to the Mount Vernon Hospital sanatorium at Northwood, Middlesex. Satisfactory progress is also being made with the King's Sanatorium, near Midhurst. What, however, is much needed at this stage is an authoritative record of existing sanatoriums already erected in this country, so that those contemplating the erection of one of these institutions may be able to ascertain precisely what has been done in other places, and we believe that some such document is actually in course of preparation in the medical department of the Local Government Board. It is to be hoped that this report will discuss the much-debated question as to whether it is desirable in the interests of the public health that the guardians shall be encouraged to make provision on a large scale for paupers suffering from pulmonary tuberculosis. This is a very far-reaching problem and we should be glad to see it dealt with in a broad common-sense spirit.

Human and Bovine Tuberculosis.

Although many points in connexion with the relationship of bovine to human tuberculosis are still unsettled the interim report issued near the middle of 1904 by the Royal Commission which was appointed in consequence of Professor KOCH'S expression of opinion in 1901 has gone far to convince all fair-minded persons that the precautions taken to prevent the conveyance of bovine tuberculosis to man need tightening up rather than relaxing. The report containing the details of its experimental work has not yet been issued but the Commission having found that certain strains of human tuberculosis gave rise to acute tuberculosis in cattle was evidently so much impressed with the results of the experiments that it deemed it desirable to express the opinion that the fact "that tubercle of human origin can give rise in the bovine animal to tuberculosis identical with ordinary bovine tuberculosis seems to us to show quite clearly that it would be most unwise to frame or modify legislative measures in accordance with the view that human and bovine tubercle bacilli are specifically different from each other and that the disease caused by the one is a wholly different thing from the disease caused by the other."[1] This

[1] THE LANCET, June 4th, 1904, p. 1530.

conclusion is not it appears, quite in accord with that which is being arrived at by the German Commission if we may read between the lines of some remarks made recently at a meeting of the Central German Sanatoriums Committee by Dr WEBER, a member of the Commission in question According to him the results of the work so far substantiate Professor KOCH'S claim as to the differences between human and bovine tuberculosis and each form belongs to a different species Fifty six cases of human tuberculosis were examined to ascertain whether the tuberculous foci were of human or bovine origin In all but six the bacillus was in the opinion of the Commission of human origin Of the six cases in which bovine bacilli were found three were young children with tuberculosis of the mesenteric glands and it is assumed that in these cases tuberculous milk of bovine origin was the source of infection In two of the other cases bacilli of both human and bovine origin were found In Dr WEBER'S opinion bovine and human tubercle bacilli are not one and the same and interchangeable, and this is the point which now remains to be determined But it would seem to us from Dr WEBER'S observations that the contention of Professor KOCH that it is not necessary to take any steps against the risks of infection through milk can hardly be persisted in in view of the facts already elicited by the German Commission

The Municipalisation of Milk supplies

The persistence of a high infantile mortality and the knowledge that such persistence is due in a material degree to the indiscriminate feeding of infants and to the employment of milk contaminated by harmful micro organisms are leading gradually to the establishment of milk depôts at which sterilised pasteurised and humanised milk is supplied at small cost for the use of children who e parents are willing to submit to certain elementary conditions as regards the use of the milk and facilities for observing the effects thereof Whatever views may be held as to the commercial aspects of this question it has to be conceded that the experiences of St Helens, Battersea, Liverpool, and other places are distinctly encouraging and it appears to us that such depôts are bound to be provided in an increasing degree in the future, indeed, as we go to press we have received a report from the medical officer of health of Birmingham in which he strongly recommends the town council of that city to follow the examples already referred to In face of a steadily falling birth rate and a persistently high infantile mortality the State in its concern for the public health cannot be expected to consider too delicately the claims of an industry which provides material of such far reaching importance to the health of present and future generations as milk, and the milk trade if it is wise will itself take steps to supply the growing demand for a milk which is unwatered, unskimmed, unpolluted and not preserved by means of unknown drugs in unknown amounts

Responsibility for the Supply of specifically Infected Milk

The verdict in a recent well known case in which a husband sought damages for the loss of his wife who died from milk borne enteric fever should do something to bring home to farmers and milk vendors the responsibility which they incur in failing to protect adequately their milk from the *liability* of becoming infected or undesirably contaminated If the more educated section of the public was familiar with the conditions under which some of the milk is drawn in rural districts there would be a strong demand for reform Filthy, badly lighted, and insufficiently ventilated cowsheds are we are afraid far from uncommon, whereas the washing of the milkers hands and of the cows' udders is a very rare event indeed The Manchester milk clauses are doubtless of value but what is really wanted is a sanitary awakening in this particular in rural districts and we think that county councils might very well undertake the task

Small pox and Vaccination

The behaviour of small pox during 1904 has fortunately failed to manifest any pandemic proportions, although we have seen in some parts of the country more particularly in Yorkshire other illustrations of that modified type of the disease which presented in the West Indies and at Cambridge such very anomalous features and which afforded yet another object lesson of the vast importance from the point of view of preventive medicine of regarding all suspicious cases as actual cases and of vaccinating or revaccinating all those exposed to such cases In the matter of administrative ineptitude the laurels of 1904 will be awarded with one accord to the board of guardians of the Dewsbury union which with small pox in its midst and the people under its care clamouring for revaccination refused to open stations whereat such revaccination could be performed expeditiously and economically It is however, fortunate that the inactivity of the recalcitrant guardians had the effect of inducing the central health department to make a new departure and to issue the Dewsbury (Small pox Prevention) Order 1904 conferring upon the town council of Dewsbury administrative powers with regard to the performance of vaccination

Vaccination Legislation

Unhappily beyond the purely local order to which we have referred above no legislative advance in the matter of small pox control has been made Sanitary authorities have met together and discussed the well known influence of the tramp as a small pox bearing social parasite, and those who are gifted with sanguine temperaments are anticipating that these discussions are likely to lead to some definite action But the hopes which the medical profession entertained at the beginning of 1904 that the Government would introduce a new Vaccination (and Revaccination) Bill have not been realised and the bread asked for in this direction has been responded to by something very much like a stone and in the shape of a continuation for another year of the Act of 1898 This apathy is the more remarkable in view of the fact that the report made to the Local Government Board by Dr BRUCE LOW as to the methods of isolating small pox in Germany must have convinced Mr LONG that a general system of compulsory revaccination would render unnecessary much of the difficulty and expense now caused by the provision of small pox hospitals The lessons of small pox epidemics though lost on our own legislators, have been taken to heart in quarters where we least looked for them It is instructive to note that the recent small pox epidemic in Turkey has induced the SULTAN to give his assent to a law which came into force on April 18th, 1904 and which renders vaccination and revaccination compulsory The Republic of Brazil has also passed a law on the same lines and although the revolutionary party endeavoured to utilise this law as a means of stirring up the people against the Government it is satisfactory to record that these antivaccinationist tactics were not successful But small pox had already wrought quite as much havoc as a small revolution since in Rio de Janeiro alone during a period of about five months of 1904 no fewer than 2036 persons out of 4690 attacked lost their lives from this disease

Isolation Hospitals

During 1904 considerable discussion has taken place in the columns of THE LANCET and elsewhere as to the value of these institutions and there appears to be a growing tendency to regard inquiry by Royal Commission or Departmental Committee as a desirable means of settling, if possible some of the points which have been raised in connexion with this question Some of those who are opposed to the use of isolation hospitals for the isolation of cases of scarlet fever have, we think unduly accentuated the opinions of those who have done their work and have passed

away. The case for or against the fever hospitals must stand or fall not on what may have been said by one or two enthusiasts a quarter of a century ago but upon the evidence to be adduced as to their operations to-day. We have learnt within recent times that disease is spread largely, in some instances it may be so mainly, by mild unrecognised and often unrecognisable cases, and this being so it is clearly contrary to expectation that a disease presenting such anomalous features will be eradicated by the use of isolation hospitals alone. But this conclusion in no sense justifies the wholesale condemnation of the isolation hospital. It is, we think, obvious that certain reforms in the administration of isolation hospitals are desirable, and among such reforms may be mentioned (1) the provision of a greater number of isolation wards in which doubtful cases may be isolated or in which patients suffering from dual infectious diseases may be housed; and (2) the appointment of a resident medical officer or the establishment of some machinery by means of which cases may not be admitted into the general wards until the notification certificate has been duly confirmed.

Infantile Mortality.

There can be no question that an appreciation by the public of the magnitude and importance of this subject is an absolute condition for the adoption of the proper steps to remedy the evil. It is for this reason that we welcome the able articles which appeared recently in the *Times* and which dealt comprehensively with the causes and remedies of this terrible drain upon our income of lives. Reference must also be made to the article which appeared during last summer in the *Municipal Journal* in which Mr. J. THEODORE DODD suggested that high rates of infantile mortality may be attributable in certain districts to the policy of boards of guardians in confining outdoor relief within the narrowest possible limits. We dealt with this subject in a leading article on August 6th, 1904, and we must refer our readers to this for a discussion of Mr. DODD'S views. To us it appears that the most hopeful and progressive step which can be taken for the future reduction of our infantile mortality is the education of our older school girls in the causes which make for health and disease respectively. This remedy, in so far as it is one, will be naturally slow in producing an effect and in the meantime efforts must be made to educate the mothers of the moment by the agency of women sanitary inspectors and other visitors who are able to obtain the confidence of the mothers and to show them how the children should be fed. According to the report of the Privy Council Committee on Physical Deterioration it would appear that ignorance and indolence are the main factors at work in the wastage of child life, and a witness from Dundee stated that it is no uncommon thing in that city to meet with a woman who has lost 11 or even 12 children out of a total of 13 to which she has given birth, while a witness from Sheffield told of a woman who had buried 17 out of 18 children.

Childbed Mortality.

To whatever branch of medicine this subject more particularly belongs the matter is one which has naturally a very material concern for preventive medicine. The fact, as was pointed out by Dr. WILLIAM WILLIAMS in his recent Milroy lectures, that some 4000 women die annually in childbed in England and Wales is one of which preventive medicine properly understood must needs take note of and devise appropriate action, more especially when regard is given to the circumstance that the lives of some 2000 of these unfortunate women are lost through puerperal fever which is a preventable and notifiable disease. Lying-in hospitals have succeeded in reducing this source of death to almost microscopical dimensions and it now remains to attack the mortality from this cause in the outside world both in the urban and the rural districts. In Dr. WILLIAMS'S view the persistency of the high mortality-rate from septic complications is due in large measure to ignorance and want of cleanliness on the part of midwives and he furnished in his lectures some admirable illustrations of his argument. These lectures have been given very opportunely in relation to the operation of the Midwives Act and it is to be hoped that all those authorities who are administering the Act will secure a copy of the lectures to aid them in their duties. The difficulty of the present moment is not the registration of midwives but the provision of machinery and funds whereby these may be so educated as to become effectual instruments by means of which this unnecessary tax upon our child-bearers may be materially reduced. A nation with a declining birth-rate must cherish those women who are able and willing to bear it sons and daughters.

Building By-laws in Rural Districts.

Considerable prominence was given to this subject during the latter part of 1904 by correspondence in the *Times* and by the action of Mr. Justice GRANTHAM in relation to the plans for certain cottages on his estate in the Chailey rural district. As this specific case notwithstanding the "finding" of the local bench is still apparently *sub judice* we do not propose to comment upon it, but as regards the question generally it has been alleged that the by-laws inflict unnecessary hardship upon landowners in their praiseworthy attempts to provide housing accommodation for the poorer classes and it has also been seriously urged that such by-laws stand in the way and retard the back-to-the-land movement which is desirable both from the point of view of agriculture and of the physique of the people. Although we are strongly opposed to any unnecessary obstacles to the building of cottages in rural districts we must confess that some of the letters which have been written upon the subject have not shown a very intimate knowledge of the facts as they actually exist. It has been implied by the correspondence that building by-laws are in force in every rural district in the country and that the adoption of such by-laws is compulsory. We believe, however, that something like 40 per cent. of the rural district councils possess no building by-laws whatever and, moreover, the adoption of such by-laws is purely voluntary on the part of such councils. In a very large number of rural districts it is therefore open to the jerry-builder to erect those edifices which he can erect most economically and which he can persuade the public to occupy. It would seem, too, that those who have written upon this subject have entirely overlooked the fact that in order to meet some of the objections raised against the use of urban by-laws in rural districts the Local Government Board recently issued a model rural series which was confined almost entirely to elementary matters relative to health and relegated matters of construction and fire prevention to secondary positions. It was, we believe, under these very modern rural by-laws that the action against which Mr. Justice GRANTHAM protests was taken. The adoption of even these by-laws is unfortunately purely optional and district councils are still presumably at liberty to allow the erection of houses on damp situations without a concrete covering, with no damp-proof course, and with a pervious well and cesspool in close proximity to one another. Sanitary progress in rural districts is still deplorably slow and if with a growing desire on the part of the people for wholesome dwellings insanitary hovels are still allowed to be erected progress may be expected to be retarded rather than enhanced. By all means let us have no unreasonable restrictions, but medical officers of health who are true to their cause will, we feel sure, resent any steps which will tend to the neglect of elementary hygienic requirements and they would do well to impress their views upon the Local Government Board by way of a counterblast to the

landowners representations. It is also to be hoped that if a Commission is appointed to inquire into the subject it will not be composed solely of landowners and builders but that the medical officer of health and the working man for whose protection public health legislation is mainly needed will have a place on the Commission.

The Slaughtering of Animals

The committee which was appointed by the Admiralty to investigate the most humane method of slaughtering animals intended for human food issued a very interesting report[1] during the year that has just ended, and its recommendations should have the effect not only of putting an end to much needless suffering but also of leading to a more general erection of public slaughter houses None of us who has seen the conditions under which animals are awaiting slaughter in the lairs of many private slaughter houses can have any hesitation in recommending the provision of public slaughter houses on the grounds both of public health and of humanity As regards methods of slaughter the committee strongly recommends that in practically all cases the animals shall be in the first instance rendered unconscious by stunning and it condemns unconditionally the Jewish method of slaughter by severing with a knife the carotid vessels of the fully conscious beast The Admiralty has already carried out the recommendations of the committee at Chatham[2] and it now remains for the Local Government Board, which is the central authority for the confirmation of by laws, to see that the recommendations are embodied in such by laws At present these by laws require the butcher "to use such instruments and appliances and to adopt such method of slaughtering and otherwise take such precautions as may be requisite to secure the infliction of as little pain or suffering as possible," but something more specific is now feasible and desirable

Purification and Disposal of Sewage

Notwithstanding the very statesmanlike fourth report of the Royal Commission on the Treatment and Disposal of Sewage which dealt almost exclusively with the pollution of tidal waters with special reference to the contamination of shell fish, we are still, legislatively speaking, where we were at the end of 1903 We reviewed this report in THE LANCET of Jan 16th, 1904, and expressed our general concurrence with its conclusions in a leading article, while later in the year we discussed fully in our columns the appendix to the fourth report which contained the elaborate bacteriological researches of Dr A C HOUSTON relative to the bacteriology of the Thames, of the sea, and of shell fish[3] and on the germicidal effect of septic tanks and bacterial filters[4] The Commissioners recommend that Rivers Boards should be formed in all parts of the country and that such boards should control among other things the laying down of shell fish and the purification of sewage Unfortunately the outcome of Dr HOUSTON's work was to show that there is at present no practicable system of sewage purification which will produce anything approaching an effluent which can be regarded as free from the bacteria of water borne diseases and hence the public health world is anxiously awaiting the issue of the next report in order that the results of experiments relative to the sterilisation of sewage may be made known But there is no sufficient reason why the general recommendations of the fourth report should not be embodied in the proposals of the legislature There is already ample work for the Rivers Boards to perform

Food Preservatives and Misleading Appellations

Another year has passed and we are still without any legislative enactment giving force to the very moderate and, so far as we are aware, uncontested recommendations of the departmental committee which issued its report in 1901 It is regrettable that the labour and expenditure involved in procuring the data necessary to make this valuable report should be thus wasted and it is difficult to understand why no steps have yet been taken to give effect to its recommendations We cannot believe that they would be seriously contested either in the Upper or the Lower House It is, however, some satisfaction to gather from the reports of medical officers of health and of analysts that the standards recommended by the committee are being accepted to some extent in courts of law In the meantime the Americans are leaving us behind in the matter of the misrepresentation of foods and drinks and by powers conferred by a recent Act it is proposed to take action in the event of a wine bearing the label of a definite vineyard but not being actually of that origin For instance, a wine branded "Chateau Larose" must be a wine coming from that vineyard and no other Similarly, with regard to brandies the label "Cognac" is only permissible in the case of brandies made in Cognac from wines grown and produced there Beer must be the fermented product of cereal grain the starch of which has been converted into sugar by malt or malting and to which an infusion of hops has been added

Ankylostomiasis

Our knowledge as to the distribution of this disease in the mines of Cornwall has been considerably advanced during 1904 by the work of Dr. J S HALDANE and Dr A. E BOYCOTT, who have contributed valuable papers upon this subject to the *Journal of Hygiene* An interesting contribution from Dr THOMAS OLIVER on Ankylostomiasis in Westphalia, Hungary, and Cornwall was also published in our columns[5] Dr OLIVER states that in Westphalia it has been found necessary to insist that the miner whose fæces are to be examined for the larvæ shall attend personally at the hospital and defecate under observation as it was found by experience that if this precaution was not insisted upon the men would bring the fæces of their wives and children We entirely agree with Dr HALDANE and Dr BOYCOTT that altogether apart from the risk of the contraction of ankylostomiasis in mines it is desirable that promiscuous defecation in these places should be put an end to It is by no means improbable that in very dry mines diseases such as enteric fever may be at times conveyed from one person to another Arrangements should be made in every mine for defecation to take place in properly protected receptacles which should be brought to the surface, emptied, and thoroughly cleansed daily

Cholera

This disease in the Far East has displayed on the whole but little activity during the past year and had not the cholera cloud appeared on the horizon of Eastern Europe it might have been contended that 1904 had been, comparatively speaking, a non cholera year In India there seems to have been a general diminution of the incidence of this disease in most of the provinces so far can be judged by the reports which have reached this country up to the date of writing In the Far East outbreaks have been observed in China at Antung, Hanoi, Shanghai and Hong-Kong, none of them apparently on a large scale Rumours were current that cholera had broken out in July at Seoul, the capital of Korea, and at Port Arthur in September but no confirmation of these rumours, which were circulated in the public press has been received In Formosa at Tamsui, in British Borneo at Kulat, and at Saigon in French Indo China epidemics of cholera have been reported during the year In the Philippine Islands in the early part of 1904 cases of cholera were recorded, some 500 in all, as compared with upwards of 20 000 in 1903 and 125,000 in 1902. The chief manifestations of cholera in 1904 were in Asiatic Turkey, Persia, and Russia It will be

[1] THE LANCET, May 21st, 1904 p 1449.

[2] THE LANCET, Dec. 10th, 1904, p. 1635

remembered that at the close of 1903 cholera was still epidemic in Syria and Mesopotamia. The disease continued prevalent in these localities in the earlier part of 1904 when the infection extended into Lower Mesopotamia. The chief places invaded by cholera during the first half of the year were Bagdad, Kerbela, Mossoul, Bassorah, Nedjef, Shamieh, and Hillieh. It is worth mentioning that a single fatal case of the disease occurred on board a British gunboat lying in the Lower Tigris. About the middle of the year cholera for a time seemed to subside but soon again showed fresh virulence, spreading to new districts and recurring in previously invaded localities. At Suleimanieh near the Persian border from July to September upwards of 1000 deaths were reported. Gradually the infection spread southwards to the shores of the Persian Gulf, invading Koweit and the Bahrein Islands, where in about a month some 1500 persons succumbed to the disease; finally, in July cholera reached as far south as Muscat. Trustworthy reports on some of the local outbreaks in Mesopotamia and Arabia are not forthcoming but it is said that upwards of 10,000 recognised cases and about 9000 known deaths occurred in Turkish territory up to the end of October. These figures are believed to understate the actual incidence of the disease. Notwithstanding the presence of cholera in Syria and Mesopotamia at the time of the holy pilgrimage to Mecca no cases of the disease are known to have occurred during the "Haj" of 1904 among the 160,000 persons who took part in the pilgrimage. From Turkish Mesopotamia the contagion of cholera was carried across the Persian frontier in June and spread rapidly throughout that country. Among some of the chief places attacked may be mentioned Kermanshah, Ispahan, Hamadan, Sultanabad, Koum, Fars, Kageroum, Borasdjundalike, Resht, Shiraz, Tabriz, Meshed, and Tehran. Precise information as to the actual numbers of cases and deaths in these Persian towns has not been made public, but it is stated on trustworthy authority that up to September in Teheran not far short of 25,000 persons perished from the epidemic; in Tabriz the number of deaths from cholera is approximately given as 4000 and in Kermanshah as 7000. In November the disease was still showing activity in the Persian provinces of Khorassan, Mazandaran, Gilan, and Azeirbeischan. Extending northwards from Persia cholera crossed the frontiers of the Russian Transcaspian province in July, invading Merv, the infection having been carried by Cossacks who had contracted the contagion at the border town of Kaakha, to which cholera had been conveyed from Persia by fugitives fleeing from the cholera-smitten town of Meshed. From Merv the disease quickly spread throughout the Transcaspian province, travelling westwards along the railway line towards the Caspian Sea. All the chief towns in the province became infected, including Askabad, Tejend, Serakh, Hasankali, and Bairam-Ali. In spite of rigorous precautionary measures the infection was carried across the Caspian Sea by boat to the port of Baku in August, from which time up to mid-October some 400 cases were reported in the town. From Baku the disease spread to the adjoining district of that name and to the town and district of Erivan, where a considerable epidemic with hundreds of deaths supervened. Some cases were conveyed by rail to Elizabethpol, Tiflis, and Batoum but did not give rise at the time to any epidemic in these towns. Subsequently, however, fresh cases appeared in Elizabethpol and Tiflis. Infection was also carried from the Asiatic shores of the Caspian Sea northwards to the mouth of the Volga up which river the disease penetrated into the towns and villages situated on and near its banks in the governments of Astrachan, Saratov, and Samara. Single cases were found on board river steamers as high up the Volga as Nijni-Novgorod and Yarcslav, the latter town being 160 miles north-east of Moscow. At the time of writing cholera is still prevalent in the governments of Eastern European Russia already named, and although the season of the year is not so favourable to the rapid spread of the disease the present existence of it in Russia is not without serious danger to Northern and Western Europe and to England itself. It may be added that when the invasion of the Volga provinces of Russia by cholera was reported in August, rumours were published in the public press that the disease had broken out at St. Petersburg and also at Hamburg. Happily in both instances the Governments concerned were able to give at once an emphatic official denial.

Plague.

Plague still persists in many parts of the world. In our retrospect for 1903 we expressed the hope that we should soon be able to record a reduction in the amount of this disease in the various quarters of the globe. But the end of 1904 still finds us confronted with a pandemic of plague, though Europe, fortunately, has been entirely free from manifestations of this malady with the exception of a stray shipborne imported case now and again. There appear grounds now for believing that Europeans are less susceptible to plague than Asiatics, and that even if the former do contract this disease they seem better able than the latter to shake it off. In India, where during 1903 over 1,000,000 cases and about 850,000 deaths from plague were certified, there were recorded up to the middle of November of 1904 no fewer than 1,135,672 cases and 909,667 deaths. So that without the returns for the remainder of the year yet to be added, the numbers already exceed those of 1903. The chief provinces which suffered during 1904 were the Punjab which had over 411,000 cases and 324,000 deaths in a population of less than 25,000,000; Bombay Presidency, with its population of less than 26,000,000, had over 327,000 cases and 242,000 deaths; the United Provinces of Agra and Oudh, with a population of nearly 48,000,000, had over 139,000 cases and 125,000 deaths; Bengal, with its 78,000,000 of population, had only 67,000 cases and 60,000 deaths; and Madras Presidency, with nearly 39,000,000 of inhabitants, had only 24,000 cases and 1900 deaths up to the middle of November. In spite of all the precautions taken and money expended plague seems to spread unchecked in India and this has led many of the leading papers there to join in an appeal to the Government to appoint a further commission of experts to commence another scientific inquiry into the etiology and epidemiology of plague in that country. What the effect of this appeal will be remains to be seen.

As in India so in China, plague persisted during the year, many towns and districts being ravaged by the disease. Information is difficult to obtain as to the proportions of epidemics in China, but reports from Hong-Kong, Canton, Fatshan, Sai-Nam, Swatow, Foochow, Chao Yang, Tathanpan, Sun-Ui, Amoy, and Honan show that the infection was widely distributed. In Hong-Kong, from which detailed information is available, it appears that nearly 500 deaths were registered from plague up to the middle of November. In the territory of Quang-Tcheou-Wan, leased by China to France and situated in the Lei-Tcheou Peninsula, which lies due north of the island of Hainan, no fewer than 2500 deaths from plague occurred between April and September. In Niutchwang the outbreak which began in August, 1903, continued up to February, 1904, during which period it is reported that over 1000 persons were attacked, of whom 958 succumbed. In Formosa more than 4000 persons contracted plague and 3000 died from the disease. In Japan there was no epidemic but some importations by vessels from infected ports took place—e.g., at Moji and Kobé. Though there were no cases of plague in human beings in Tokio an outbreak among rats was discovered during May; this was believed to have been imported on shipboard from Hong-Kong and Niutchwang but the epidemic among rats

was quickly suppressed by the measures adopted. In the Philippine Islands only sporadic cases to the number of 60 were reported, with 50 deaths. A few imported cases were also certified in Singapore; and at Puket on the west coast of the Malay Peninsula there was a localised outbreak. At the port of Linjah in the Persian Gulf from April to June 125 deaths from plague were recorded. Several imported cases occurred at Aden, but in November some 25 indigenous cases were observed at Crater, five miles from the port of Aden, and an epidemic seems imminent there as we write.

In Egypt plague has smouldered on throughout the year but the incidence did not assume epidemic proportions. Altogether up to the end of October about 600 cases had been notified with about 470 deaths, 106 cases and 68 deaths being referred to Alexandria. Only a single fatal case of plague was reported in British East Africa and that occurred on board a British steamer at Bukoba on Lake Victoria Nyanza. In German East Africa an outbreak was notified at Iringa, a station 30 days' march from the coast and 20 days from the Portuguese frontier. From January to March 47 attacks, 41 of which were fatal, came under observation. The early cases were examined bacteriologically to establish the diagnosis. Iringa is within the Central African endemic area of plague. In 1904 plague reappeared at Maguda in the Portuguese territory of Mozambique and a single imported case was certified near Lorenzo Marques in July, imported from the Transvaal, where the disease was then epidemic. At Johannesburg plague broke out in March in the coolie location which had been repeatedly condemned by the medical officer of health. From March to August, when the Transvaal was officially declared free from plague, 149 attacks were certified. No cases of plague occurred at Cape Town during 1904, but some 50 cases were recorded at Port Elizabeth where infection among rats was observed throughout the year. At East London, where also plague in rats persisted, only a single fatal case was notified. Three cases, one fatal, occurred at Uitenhage. No other human cases were reported in any other district in Cape Colony. In Natal there was a recrudescence of plague at Durban but only about a dozen cases, ten being fatal, came under observation. In Mauritius the disease was again epidemic but in less degree than in 1903, for only about 500 cases and 350 deaths were recorded against 1395 attacks and 1035 fatal cases in the previous year. In Australia cases of plague were again reported in 1904 in New South Wales at Sydney but these were sporadic, amounting to less than a dozen in the year. In Queensland, at Brisbane, Ipswich, and Maryborough scattered cases came under notice. In Western Australia a few attacks of plague were notified at Perth and Fremantle. At Auckland, in New Zealand, a single fatal case and two suspected cases were reported. In the Sandwich Islands sporadic cases continued to be met with during the year, amounting, however, to less than 12 altogether, most of them being notified from Honolulu.

In the United States of America during the first quarter of the year 11 cases and eight deaths from plague were certified at San Francisco, but no fresh cases from March to December. In South America the disease was epidemic in Brazil, especially at Rio de Janeiro, where up to October nearly 700 cases had occurred, and at Bahia 157 cases and 100 deaths. Other outbreaks were reported in Brazil from Pernambuco, Pindamonhangaba in the province of Sao Paulo, in Rio Grande, St. Luis de Maranhao, Para and Porto Alegre. In Argentina plague appeared during March at San Nicholas among persons employed in a grain warehouse and in March suspicious cases also were reported as having occurred in the port of Buenos Ayres, though these were not officially acknowledged by the authorities. At Tucuman several cases, the continuation of the 1903 outbreak, were notified in January. At the end of October plague broke out in the town of Salta and about the same time a fatal case of plague was reported in Buenos Ayres stated to have been imported from Paraguay. No plague in man or animals was reported in Rosario or any other of the great grain ports of the River Plate, but a single case of plague developed on board each of two vessels sailing from the River Plate to British ports (the Tyne and the Thames); in both instances it is alleged that the rats on board were infected. In Paraguay plague reappeared at Asuncion in October, but the Government refused to admit the existence of the disease, though supplying anti-plague serum to local medical practitioners and offering a reward for each rat or mouse delivered to the local officials. In Chile plague was epidemic at Antofagasta, Valparaiso, and at Arica. In Peru a widespread epidemic occurred during the year, the chief places affected being Lima (where up to the beginning of October 358 cases were recognised), Callao, Paita, Salaverry, Trujillo, Sechura, San Pedro, Pascamayo, Etan, and Colan. In Mexico the epidemic, which began at Mazatlan in December, 1903, lasted till March, 1904, during which time 351 cases and 296 deaths from plague were recorded. In Turkey plague was not epidemic during 1904 but several sporadic cases were reported at Smyrna (six cases and four deaths); similar occurrences had taken place at this Levantine port in 1901, 1902, and 1903. It is believed that all the cases of plague which occurred in 1904 at Smyrna were not notified. In Russia early in the year a single fatal case of plague occurred in the person of Dr. TOURCHINOVITCH-VYJNIKEVITCH, medical director of the Imperial Institute Laboratory at Kronstadt. He had been experimenting with plague cultures and had accidentally inoculated himself. On board a ship which arrived at Havre from Bombay in May five cases of illness occurred, with four deaths, which were very suspicious of plague. But bacteriological investigation was not conclusive and the diagnosis remained unsettled, though the illness was believed almost certainly to have been plague. At the end of November a paragraph was published in a London daily paper asserting that cases of plague were occurring at Oporto in the dirtiest and most squalid parts of the town, and that a medical student had died in November from plague contracted through a wound while making a post-mortem examination on a woman who had died from the disease. No confirmation of these statements, however, has as yet come to hand. No plague, with the exception of two ship-borne cases, occurred in the British Islands during 1904. The two ship-borne cases have already been alluded to above and both occurred on board ships from the River Plate, one being removed to the port hospital in the Tyne and the other to the London port hospital at Denton at the mouth of the Thames. Several ship-borne cases suspected at first to be plague were also reported during the year at British ports but after bacteriological investigation they were, we are informed, definitely stated not to be plague.

Yellow Fever.

Great strides have been made in the progress of our knowledge of yellow fever during the past few years. At present many eager and skilled investigators are at work on the subject with a view to add to our knowledge of the specific organism which gives rise to the disease. We understand that the Liverpool School of Tropical Medicine has despatched a second expedition to the Amazon to investigate further on the spot the problems yet unsolved regarding yellow fever. During 1904 no outbreaks of any considerable dimensions have been reported and the number of cases and deaths fell far below those recorded in 1903. The States of South and Central America continue to afford the most numerous groups of cases. In Brazil the main manifestations of yellow fever were in Para, Pernambuco, and Rio de Janeiro. The latter town has had a singularly

unfortunate experience during 1904, for in addition to yellow fever and plague it was ravaged by a very severe epidemic of small-pox. In Mexico a number of localities suffered from yellow fever, especially Merida, Tehuantepec, Vera Cruz, and Coatzacoalcos. Cases, too, were reported from Panama and from several places in the Republic of Columbia; also in Costa Rica, Ecuador, and Venezuela. A few cases were notified in certain localities in Peru. In Cuba cases of yellow fever were imported on shipboard into the ports of Habana, Santiago, and Sagua. Sporadic single cases, probably imported, were observed in Jamaica and in Curaçao. In French West Africa the colonies of Grand Bassam and Assinie were declared officially to be infected by yellow fever during 1904, but no details of the outbreaks have yet reached this country. On the whole, the past year has shown a marked diminution in the amount of the disease throughout the world, but whether this is due to the efforts now being made to suppress the *stegomya fasciata* or to climatic and other causes it is not possible to say.

Malta Fever.

During the year considerable attention has been given to Mediterranean or Malta fever. For some time back the large amount of invaliding and consequent inefficiency caused by this disease among the troops garrisoning our Mediterranean possessions and among the crews of the ships of war stationed in this part of the world has roused the authorities to action and as a consequence the Royal Society, acting in concert with several Government departments, appointed a Commission to investigate on the spot the etiology and epidemiology of the disease. The joint Commission was presided over by Colonel DAVID BRUCE, F.R.S., of the Royal Army Medical Corps, and under him were Major W. H. HORROCKS and Captain J. C. KENNEDY of the Royal Army Medical Corps, Staff Surgeon E. A. SHAW and Surgeon R. T. GILMOUR of the Royal Navy, Dr. R. W. JOHNSTONE, medical inspector of the Local Government Board, and Dr. ZAMMIT of the Malta Board of Health. Various theories have been current as to the modes in which this disease is spread, some believing that it is propagated through the bites of mosquitoes; some maintaining that it is diffused by the excreta; some, again, contending that exhalations from the skin convey the infection; while others blame specifically-infected dust as the vehicle for spreading it. The report of the Commission is awaited with great interest and it is expected that the new experiments and observations made by the different members will form a valuable contribution to scientific and preventive medicine and will finally settle the etiology of Mediterranean fever, indicating the best means for preventing the suffering and the great loss of efficiency caused by it among our navy and army as well as among the civil population of Malta, Gibraltar, and other places under British sway.

Epidemic Cerebro-spinal Meningitis.

This disease, sometimes better known as cerebro-spinal fever, has of late years become apparently more prevalent throughout the world than formerly, or perhaps, rather, it may be said, that it is probably more frequently recognised by medical men than in past years. During 1904 several outbreaks of the malady have been observed in India, in New South Wales, in Formosa, in Egypt, and in the United States of America. In the State of New York, for example, during the first nine months of 1904 no fewer than 1445 deaths were certified from this cause alone. So far as is known no epidemics of this malady were reported in the British Islands, though here and there sporadic cases, some of them in London, were discovered, the bacteriological investigation of which confirmed the diagnosis by finding in the spinal fluid during life, or in the brain or spinal cord after death, the specific organism which is associated with the disease.

Beri-Beri.

Some amount of public attention was drawn during the year to this disease by its occurrence among a batch of Chinese coolies imported into the Transvaal to work in the gold mines. Considerable discussion followed in Parliament as to the nature and causes of this disease but without much real result. Cases of the disease are from time to time landed at our ports, especially from foreign sailing ships, but they are not generally regarded as "infectious," though for political purposes in Parliament beri-beri was assumed to be "highly infectious." In January, 1904, a report was issued by a committee of the Royal College of Physicians of London, consisting of Sir WILLIAM CHURCH, Dr. J. F. PAYNE, and Sir PATRICK MANSON, "on beri-beri occurring on Norwegian ships." This report dealt largely with that of the Norwegian commission over which Professor UCHERMANN of Christiania presided and practically endorsed the latter's conclusions and recommendations. In the report, which is signed by Sir WILLIAM CHURCH, attention is drawn to the fact that beri-beri is believed to be more common on board English ships than is generally admitted and the reason for this, it is suggested, is that captains and ship surgeons, not suspecting its presence, overlook the existence of the disease and make their return of the sickness under a wrong heading, thereby vitiating the statistics. In consequence of this last report the Board of Trade has issued a circular containing a reprint of the more important recommendations of the Norwegian commissioners but point out that the food scale drawn up by the Mercantile Marine Committee gives effect to the majority of these recommendations. There has been a strong contention that ship beri-beri is a different disease from that met with among Asiatics. Beri-beri has been very prevalent in New Caledonia and it is interesting to mention that it is believed among the natives that the consumption of water-cress is an almost certain cure. Reports have been current that beri-beri has caused a large amount of invaliding among the Japanese troops in Manchuria during the present war but the statement has not yet received official confirmation.

Quarantine Regulations.

An important step was taken during 1904 to bring the obsolete and ineffective quarantine regulations of certain British colonies into line with those of the mother country. For a long time the restrictive regulations in force in many of our West Indian colonies have vexed the souls of righteous sanitary reformers. Last year, owing to the prevalence of small-pox in some of these colonies, the restrictions imposed against them by their neighbours brought down ridicule upon the local regulations. For example, one colony, to protect itself against small-pox in a neighbouring island, forbade the importation of pigs and potatoes. It became evident that a great effort was necessary to place matters on a modern and commonsense footing and to this end the Colonial Office proposed an intercolonial conference of delegates from various West Indian colonies to discuss the stringent and commerce-hampering rules in force. At the request of the Colonial Office the assistance of one of the staff of the Medical Department of the Local Government Board was sought and in the end Dr. THEODORE THOMSON, who had acted as one of the British delegates at the Paris International Conference of 1903, was selected for this duty. We hear that prior to the meeting of the West Indian Conference at Barbadoes in April Dr. THOMSON made a visit and inspection of the chief ports and sanitary stations in the West Indies and with the facts thus gathered he was able to discuss fully with the delegates the sanitary requirements of each place. Ultimately, with Dr. THOMSON'S assistance, a sanitary convention was drawn up and signed by the delegates, repealing the obsolete regulations hitherto in force and replacing them by others more in keeping with modern scientific knowledge and

conforming to recent international agreements. In our opinion such useful and important work from the sanitary as well as the commercial point of view might well be extended to other groups of British colonies and dependencies where there is great need for the application of modern sanitary principles

Public Health Legislation in 1904

It will already have become obvious to those who have followed the foregoing remarks relative to public health that not only has the year 1904 failed to see the passage through the legislature of any public health measure of first- or even second class importance, but that, notwithstanding the numerous matters upon which legislation is urgently needed, the session was almost entirely barren With the exception of the Expiring Laws Continuance Act, 1904, which extends the operations of the Vaccination Act of 1898 until Dec 31st, 1905, the only measure having any public health bearing which became law in 1904 was an Act to enable the Local Government Board to frame regulations in accordance with the provisions as to plague, cholera, and yellow fever which are contained in the International Convention of 1903

It is to be regretted that we are unable to chronicle a more satisfactory legislative progress, as it indicates in our view a want of appreciation and concern on the part of the legislature for the health of the people A similar want of appreciation was manifested in the report of the departmental committee which was appointed to consider the status of the Board of Trade and of the Local Government Board and which we dealt with in a leading article in THE LANCET of June 25th, 1904 It is difficult, in our view, for the President of the Local Government Board to exercise adequate influence at Cabinet meetings so long as the department which he represents is relegated to a second rate position, and thus it comes about that pressing sanitary legislation is dropped out of the programme of the Government session after session It is quite an anomaly that while local government throughout the country is advancing in importance and status the rank of the central department which presides over such local government should remain practically what I was a quarter of a century or more ago Until this anomaly is removed, either by the creation of a Secretary of State for Local Government or by the formation of a Board in being in place of a Board which never meets, we are liable, we fear, to have to record for several years to come very slow progress in public health legislation

EXOTIC AND TROPICAL DISEASES

During the year 1904 what may be termed the "discovery rate" in tropical medicine has maintained the high figure that has been established during the past few years The rapidity of accumulation of new facts and principles in tropical medicine is without parallel in the history of any science and the goal is still a long way off

Non specific Tropical Fever of a Continued Type

In spite of the careful investigations of the past ten years there still remain with us a number of unclassified ailments occurring in warm climates which are refused admission into either the group malaria or the group typhoid fever As notified below febrile conditions of an unclassified type have been largely subtracted from by the recognition of a specific organism entitled at present the Leishman-Donovan body, but even allowing for this substantial reduction there yet remain an enormous number of febrile states which in the official returns from many of our colonies are described as 'febricula,' "simple continued fever," and "ephemeral fever." At one time this group comprehended several of the malarial ailments, kala-azar, many of the cases of typhoid fever, sun fever, and, in fact, any condition associated with a rise in temperature of an unexplained or anomalous character. Dr ALEXANDER CROMBIE has made this subject peculiarly his own for some years past and in the presidential address which he delivered at the Section of Tropical Diseases at the meeting of the British Medical Association at Oxford in July, 1904, he again stated his views in regard to the occurrence in hot climates of fevers of a continued type Dr CROMBIE read a paper at the Indian Medical Congress in 1894 on Indian Fevers and the criticisms passed on the principles he then enunciated have arranged themselves under two headings The clinicians, on the one hand, have favoured his belief as to the occurrence of these fevers and the bacteriologists, on the other hand, have uncompromisingly opposed it Dr CROMBIE holds that he is still justified in concluding that there occur in warm climates fevers of a continued type other than typhoid fever and malarial remittent fevers The commonest type of fever in India is a "single paroxysm fever" lasting it may be a few hours or a few days, but it is a single paroxysm with no tendency to recur If it lasts a few hours it is called "ephemeral fever," if a day or two it is termed "febricula," and if it continues for several days it is known as "simple continued fever" Attacks of "ague," consisting of cold, hot, and perspiring stages, form a minority of the febrile conditions observed in India, the attacks of fever notified by Dr CROMBIE give no clinical evidence of periodicity such as is caused by the life cycle of a parasite renewing itself at frequent intervals in the blood In cases of this nature the malarial parasite is not to be found and they recover without quinine Attempts to refute the non malarial nature of these complaints have proved futile and it would seem that a large proportion of the febrile attacks of hot climates must still be included in the terms "febricula" and 'simple continued fever'

Non malarial Remittent Fever

A fever of considerable severity, duration, and mortality, lasting on an average six weeks if not fatal at an earlier period is another of the tropical fevers in which Dr CROMBIE failed to find evidence of malarial infection and which he named "non malarial remittent fever" Dr EDMONSTON CHARLES was inclined to the belief that the fevers of this type were in reality Malta fever but the clinical picture of the two conditions is so unlike that it seems impossible, unless infection by the same parasite is proved, even to associate them A common parasitic infection has not been found and the suggestion may be held to be confuted At one time the evidence afforded by the leucocyte count was held, especially by Captain LEONARD ROGERS, I M S, to be diagnostic of the presence of typhoid fever and malaria, an increase of the percentage of lymphocytes being considered indicative of typhoid fever and of the large mononuclears of malarial fever But the presence of an increased percentage of mononuclears is not confined to malarial infection it has been found in the spotted fever of the Rocky Mountains, in the febrile state due to trypanosomiasis, in blackwater fever, and in that associated with Leishman's bodies, and it would seem as though the leucocyte count is not incontrovertible evidence of an active or even recent protozoal infection of any kind In regard to the question of typhoid fever Dr CROMBIE remarks that it requires something more than an increased percentage of lymphocytes or even the Widal reaction to establish the fact that typhoid is a common fever among the natives of Bengal

Plague

In India plague continues with unabated virulence and the recurrence of the disease during the last months of 1904 and the first months of 1905 promises to equal, if not to exceed, the high mortality of 1903-04 The mortality from plague in India during the first six months of 1904 reached the enormous total of 725 631, against 533,565 during the corresponding six 1903,

The figures speak for themselves as to the complete failure of modern methods of prophylaxis or treatment in regard to this disease. Compared with plague most other diseases are insignificant in regard to their duration and their mortality. Cholera prevails as an occasional epidemic only; it rages with great virulence for a few weeks in any given locality and it is not beyond the powers of modern sanitary methods to cope with and to limit; but plague seems, when once it has established its hold upon a community, to defy all efforts at control. In India it has continued with an increasing mortality year by year ever since 1896. Plague continues to recur in Mauritus, in Hong-Kong, and South China with persistent regularity. and with a lesser degree of severity in one or two towns of Cape Colony. From the Philippines, Formosa, and Brazil the disease is reported to have been active during 1904.

The literature of plague has been enhanced by the able report of Dr. WILLIAM HUNTER of Hong-Kong presented to the Government of that colony. Following up the experiments instigated by Dr. W. J. SIMPSON and made in Hong-Kong during 1902–03, HUNTER has succeeded in throwing a new light upon many of the phases of plague hitherto but little understood. Under the title of "The Symptom-Complex of Plague" Dr. HUNTER draws attention to the tendency of medical practitioners to regard the fever and the bubo as the starting point of the illness and to neglect the fact that vomiting, diarrhœa, and gastro-intestinal derangements generally precede both the fever and the bubo. Mr. J. BELL, of the Government Civil Hospital, Hong-Kong, was the first to draw attention to these initial symptoms of plague and Dr. HUNTER claims that these facts point to the alimentary canal as the most likely channel by which the plague bacillus gains entrance to the human body. Post-mortem evidence seems to corroborate the importance of the part which the alimentary tract plays in plague, the mucous membrane of the mouth, pharynx, stomach, and the whole length of the small and large intestines showing hyperæmia, petechiæ or hæmorrhages of considerable size, and minute ulcerations. Plague, according to Dr. HUNTER, is primarily a septicæmic disease and the variety of type by which the septic state is accompanied, whether bubonic, pneumonic, or purely septicæmic, is of insignificant importance. The idea that the bubo is the special feature and stamp of plague can no longer be admitted. It has been hitherto understood that the plague bacilli are shut up for a time, at any rate, in the bubo, and it was held that only when the contents of the gland are diffused and pass into the blood the infective condition becomes general. This belief was grounded partly on the clinical features, incorrectly reported as it now appears, and partly upon the statement that the plague bacilli were not to be found in the peripheral blood until a short time before death. Neither of these confidently reported observations is, according to Dr. HUNTER, true. The fever and the bubo are not the *ab initio* attributes of plague, diarrhœa, vomiting, and colic preceding the febrile and glandular conditions. The plague bacilli are present in the peripheral blood from a very early stage of the disease, before the development of the bubo and the fever, and are to be found when the gastro-intestinal symptoms first develop. Another factor supporting the septicæmic nature of plague is the presence of the bacillus in the blood during convalescence and for an indefinite period after all signs and symptoms have disappeared. The infectivity of a person who has had plague would thereby be probable for an indefinite period. This phenomenon even suggests the possibility of a resting stage of the parasite in man.

The skin lesions met with in plague serve to uphold the inference that plague is primarily a septicæmic disease. The cutaneous papules, vesicles, and pustules occurring in the course of the disease are found infected with plague bacilli and are no doubt the result of focal multiplication and have nothing to do with the point of entry of the virus. Infection by the skin is a possible but an uncommon channel of transmission of the disease and the occurrence of a bubo in no way presupposes lymphangitis and a wound of the skin. Moreover, the fact that it is the deep, not the superficial, glands that are usually first attacked, still further appears to negative primary cutaneous infection. The spread of plague by insects is fully considered by Dr. HUNTER. He examined many insects to determine if they could transmit plague bacilli either upon or in their bodies. Flies collected in a plague hospital and in the public mortuary showed plague bacilli on their bodies to the extent of 75 per cent. of those examined. Cockroaches and bugs were also found to harbour the bacilli on their bodies. The transmission of plague by means of insects assimilating the bacilli in food and getting rid of them in their excreta would appear to be a fruitful channel of infection. The alimentary canal of flies, bugs, spiders, and cockroaches has been shown to contain plague bacilli in numbers and the possibility and likelihood of food, cooking utensils, and fruit becoming infected and serving to convey the disease are rendered highly probable.

Malaria.

Several contributions to the literature of malaria have appeared during 1904, the chief subject dealt with being that of prophylaxis. Malaria must now be regarded as a contagious disease. The source of contagion, as pointed out by Dr. J. W. W. STEPHENS, lies in the fact that in the tropics the native population, especially the child population, carries malarial parasites in its blood and that the general native community may be infected with malaria without the least outward sign of sickness being present. To the European resident this is the chief danger, as it is from the native that the anopheles mosquito gets its parasites and these it transmits again after the lapse of a certain time to the European. Although at the present time there are known to exist about 100 species of anopheletes, the number of species that have been proved to convey malaria are about one dozen only. This addition to our knowledge is of importance, inasmuch as it limits the work of extermination of anopheletes to those actually proved to be malaria-bearing. As an instance of the practical importance of this the experiments conducted by Lieutenant S. R. CHRISTOPHERS, I.M.S., and Dr. STEPHENS in India showed that anopheles Rossii did not carry malaria under conditions where anopheles culicifacies did do so; and as the anopheles Rossii exists in the large towns in India in myriads the destruction of this species, so far as malaria infection is concerned, is futile. Moreover, each anopheles has a breeding ground of its own, so that given the species of malaria-bearing mosquito it is only necessary to deal with the breeding ground where it is known to exist. Hitherto in work directed to the prophylaxis of malaria by means of the extermination of mosquitoes it has been the custom to institute brigades the duty of which is to clean the backyards of dwellings in tropical cities, to fill up puddles, to cover over water-barrels, and to remove all foul and stagnant water around tenements, thereby doing away with the breeding grounds of mosquitoes. But it is now stated that the anopheles endowed with the power of conveying malaria breeds in the clean water of streams, in the edges of lakes, and in the water used for irrigation purposes in the fields, so that the prospect of complete prophylaxis by destroying the breeding grounds of mosquitoes seems untenable. If a recognised medium in which to raise the larvæ of mosquitoes is the water of the paddy field the situation in this phase of the question seems to be summed up in the following paradox:—allow irrigation and malaria prevails; stop irrigation and famine results; so it would thus seem to be

a question of malaria or famine We are thus compelled to recognise the importance of other means of stamping out malaria, such as the exhibition of quinine mechanical prophylaxis by wire netting of doors and windows, and protection from mosquito bites by veils and gloves The question of segregation of Europeans from the native population has been much discussed and there can be no doubt that by segregating Europeans from the source of contagion—the infected natives—they would benefit largely so far as malarial diseases are concerned The feasibility of destroying mosquitoes by the introduction of their natural enemies into a locality has been suggested Fish are known to consume the mosquito larvæ and dragon flies are known to prey on mosquitoes but the former cannot be introduced into the water used in irrigating fields and the latter are too occasional in their geographical distribution to be regarded seriously as destroyers of the adult insects

Two experiments in the destruction of mosquitoes have been made recently, one at Ismailia by Major RONALD ROSS and the other at Mian Mir by Captain S P JAMES I M S, and Lieutenant CHRISTOPHERS The Ismailia experiment was undertaken in a locality distinctly and definitely circumscribed and was successful, the Mian Mir experiment consisted of the destruction of breeding grounds in a small part of a notoriously malarial cantonment and was unsuccessful showing that any attempt at local destruction of mosquito larvæ is futile as the adult mosquito can come in from the surrounding districts and annul all such limited attempts at prophylaxis

The Leishman Donovan Body and Malarial Cachexia

In November 1900 Major W B LEISHMAN first found the parasite with which his name is universally associated The patient, a soldier, had been resident at Dum Dum in Bengal and after the patient's death Leishman found the body in smears of spleen pulp On April 9th, 1903 Major C DONOVAN met with the same parasite also in blood smears taken post mortem from the spleen In June of the same year Major DONOVAN also found the parasite in blood taken by puncture from the spleen during life The parasite has also been recovered from the peripheral circulation when the temperature was above 103° F, from the liver bone marrow, submucosa of the large intestine ulcers of the skin ulcerations of the mouth, and occasionally from the blood from the kidneys and the suprarenals So far cases exhibiting the Leishman Donovan body in the blood have been reported from three or four widely separated districts of India from China Tunis, Algiers, Arabia, and Egypt The more marked symptomatic features of the disease are (1) splenic and hepatic enlargement, the former only being constant, (2) an earthy pallor of the skin accompanied later in the complaint by an intense degree of emaciation and muscular atrophy, (3) an irregular and long continued remittent fever (4) hæmorrhagic effusions beneath the skin epistaxis bleeding from the gums and purpuric eruptions, (5) œdema of various regions of the trunk and limbs of a transitory nature (6) a blood count showing a marked mononuclear increase and (7) congestion of the lungs, diarrhœa, and dysentery are frequent complications of the condition The nature of the parasite has given rise to a considerable amount of discussion and it cannot be said to be settled yet Major RONALD ROSS regards the parasites as representing a new genus belonging to the sporozoa, LAVERAN considers the bodies to belong to the piroplasmata, Major LEISHMAN is of opinion that they constitute a stage in the life history of a flagellate organism closely resembling a trypanosoma if not actually belonging to that genus The tendency of the majority of authorities is to coincide with LEISHMAN'S flagellate idea of the organism and the transformations undergone by a blood parasite in the stone owl recorded by SCHAUDINN serve to confirm this view SCHAUDINN describes how the trypanosomata in the mid gut of the mosquito lose their typical outline and entering the epithelial cells of the intestinal mucosa become contracted, the flagellum shrinking in to a short rod shaped structure In this resting stage fission occurs the organism pushes its way between the cells of the muscular coat of the stomach, and reverts to a blepharoplast or micro nucleus from which it was derived From this resting stage a freely mobile trypanosoma is again developed the flagellar apparatus arising from the blepharoplast by a mitotic process PROWAZEK observed a similar transformation of a parasite in the house fly of a trypanosomal character which also assumed resting forms Major LEISHMAN is of opinion that a close resemblance obtains between the resting forms of trypanosomata observed by SCHAUDINN and PROWAZEK and the parasites known as the Leishman Donovan bodies

A striking observation by Captain ROGERS communicated in July 1904 appears still further to justify the association of the bodies with trypanosomata Captain ROGERS announced that from cultures of the bodies he had succeeded in cultivating fully developed trypanosomata This observation if it is established is one of the most important contributions to tropical pathology of modern times and we await its confirmation with interest

THE GENERAL MEDICAL COUNCIL

The resignation by Sir WILLIAM TURNER of the post of President of the Council at the end of the autumn session of the year was not wholly unexpected Sir WILLIAM TURNER who has filled the post with universal approval since the death of Sir RICHARD QUAIN has recently been appointed Principal of the University of Edinburgh and it was generally felt that being no longer quite a young man he would probably wish to be free from the onerous responsibility of the Presidency of the General Medical Council In the autumn session he declared amidst general and genuine manifestations of regret his intention of retiring and Dr DONALD MACALISTER the representative of the University of Cambridge on the Council, was chosen as his successor Dr DONALD MACALISTER'S election to the Presidential chair was commonly anticipated and formed a practical tribute to the good work that he has done during the time that he has sat upon the Council

The proceedings at the two sessions of the General Medical Council during the year have been interesting although their net result in medical politics cannot be called very great The summer session was chiefly memorable for lengthy debates in which the attitude towards the General Medical Council of the Royal College of Physicians of London and the Royal College of Surgeons of England was sharply criticised The Council claimed a supervision over the Colleges especially in regard to what should be recognised as a sufficient examination in the preliminary scientific subjects which the Colleges thought right in the interests of the members of their corporations to resist A proposition that the Lord President of the Privy Council should be requested to introduce into Parliament a Bill to confer on the General Medical Council statutory power to establish and to maintain registers of medical and dental students and to impose a fee not exceeding £1 for registration therein, which found favour with the Council at the May session, was regarded by the Colleges as having a distinct bearing upon their claims to independence in the matter of the education of their students The argument in favour of this innovation was on the face of it that the fees received from the students would meet the expenses of the General Medical Council which have for some years exceeded the income, the new source of revenue, it being estimated more than counterbalancing the average loss We say on the face of it, for, as a matter of fact, such a Bill would confer on the General Medical Council exactly that supervision of medical education which many think that it should enjoy and in which the Colleges decline to acquiesce It is obvious

that if the Council could impose by statutory right a registration fee the Council would have the power of approving or disapproving of the institutions recognised by the various licensing bodies at which medical study should be begun and the right to nominate such institutions would be forfeited by the various qualifying bodies. It was exactly this right for which the English Conjoint Board was contending and in the May session, it seemed to some observers, contending unsuccessfully. The position, however, was altered in the autumn session when the Lord President of the Privy Council, instead of acquiescing in the suggestion that he should introduce into Parliament a Bill for the registration of medical and dental students, asked the General Medical Council to confer with the representatives of the various qualifying bodies as to their views on the subject. The General Medical Council, finding that the opposition to the registration of medical students would be more serious and general than had been supposed likely, dropped the subject. This was, as far as can be seen, the only course that the Council could pursue but it leaves the question of finance unsolved. The attitude of the Privy Council does not strike us as very sympathetic towards the legitimate aspirations of the General Medical Council to be recognised as a central authority upon medical education.

An unfortunate debate ensued over the report of the visitor and the inspector of the final examinations of the University of Edinburgh, the lesson from which seems to be that the Council should make the instructions to its delegates more exact. For there will be difficulty in obtaining the services of visitors and inspectors if unfavourable reports can only be made at the risk of acrimonious comment.

THE BRITISH MEDICAL ASSOCIATION.

The seventy-third meeting of the British Medical Association was held in Oxford under the presidency of Dr. WILLIAM COLLIER. This meeting was the fourth occasion on which the Association has met in Oxford. The attendance was very large and the meeting was most successful in every way, excepting as regards the weather. Torrents of rain fell nearly every day, except on Thursday, July 28th. The evening of that day was the one chosen for the reception by Mrs. COLLIER and the ladies of the reception committee in New College Gardens, and a more beautiful setting for a reception could scarcely be found. As regards the scientific side of the meeting the sections were well attended and Dr. COLLIER took as the subject of his Presidential Address, the Growth and Development of the Oxford Medical School.

The conferment of honorary degrees, which was held in the Sheldonian Theatre on July 28th, was a very brilliant gathering and the display of academical dress was amazing. The Doctors of the ancient University of Paris were particularly noticeable in their striking and dignified costume and we noticed at least one Oxford Doctor who appeared in his "habit"—an academical garb almost unknown to non-resident members of the University.

Altogether we think that the British Medical Association may be congratulated upon a most successful meeting and we must again express our thanks to the authorities of the Association for many courtesies extended to our representatives.

HOSPITAL FUNDS.

For many years past the various Lord Mayors of London have worked most zealously in the cause of the hospitals of our great city and the present Lord Mayor, Mr. JOHN POUND, who is *ex-officio* President of the

Metropolitan Hospital Sunday Fund,

has given evidence of his great interest in the work of the London hospitals by calling together in conference the commercial travellers of London for the purpose of considering the best means of raising the total sum collected on Hospital Sunday, 1905, to £100,000, an amount which has hitherto been looked upon as ideal but which, judging from the enthusiastic meeting held at the Mansion House on Dec. 17th, seems within measurable distance of realisation. The total sum collected during the past year by this Fund under the presidency of the Right Honourable Sir JAMES THOMSON RITCHIE was £63,054 17*s.* 8*d.* The collections in the various places of worship resulted in an amount of £47,911 14*s.* 2*d.*, being, with the exception of last year, when the Fund was augmented by the encouragement given by THEIR MAJESTIES' visit to St. Paul's Cathedral, the largest on record. The Metropolitan Cathedral of St. Paul's headed the list with £5492 12*s.* 6*d.* The following are some of the collections from the contributing churches and chapels: Christ Church, Lancaster-gate, Rev. Prebendary RIDGEWAY, £1520; St. Michael's, Chester-square, Rev. Canon FLEMING, £1392; St. Mary Abbots, Kensington, Rev. Canon PENNEFATHER, £788; St. Peter's, Eaton-square, Rev. Prebendary STORRS, £756; St. Peter's, Vere-street, Rev. Canon PAGE ROBERTS, £645; Holy Trinity, Sloane-street, Rev. H. R. GAMBLE, £460; Theistic Church, Swallow-street, Rev. C. VOYSEY, £318; the City Temple, Rev. R. J. CAMPBELL, £302; Great Synagogue, the Very Rev. the CHIEF RABBI, £256; St. Columba, Pont-street, Rev. ARCHIBALD FLEMING £206; Essex Unitarian Church, Kensington, Rev. F. K. FREESTON, £206; Union Chapel, Islington, Rev. W. H. HARWOOD, £201; St. Paul, Presbyterian Church, Westbourne Grove, Rev. R. ROBERTS, £125; Greek Church, Bayswater, The Very Rev. the ARCHIMANDRITE, £90; Victoria Park Christian Evidence Association, £90; Upper Norwood Central Hill Baptist Church, Rev. S. A. TIPPLE, £60; the Oratory, Kensington, the Very Rev. Father PRIOR, £57; Dutch Church, Austin Friars, Rev. S. B. DE LA FAILLE, £52; German Lutheran Church, Denmark-hill, Rev. A. WYSARD, £47; West London Wesleyan Mission, £38; and Wanstead Friends' Meeting, £38. It cannot be too generally known that the country districts which furnish approximately 25 per cent. of the in-patients treated in the metropolitan hospitals contribute almost nothing to the Fund. Mr. GEORGE HERRING again generously added one-fourth to the amount collected in places of worship, his gift this year being £11,926. Mr. WILLIAM HERRING and Mr. CHARLES MORRISON gave donations of £1000 each; Sir SAVILE CROSSLEY again divided his contribution of £1000 between this Fund and KING EDWARD'S Hospital Fund, and "Delta" sent his twenty-sixth donation of £200. A legacy of £500 was paid by the executors of the late Mr. ROBERT DAVIDSON and notice of a similar amount has been received under the will of the late Mr. JOHN COHEN.

Awards were given to 215 institutions. £56,247 14*s.* 3*d.* being divided amongst them. Although this is the oldest of the London Hospital Funds it has a very powerful, but friendly, rival in

King Edward's Hospital Fund for London,

which was established in 1897. The members of the Royal Family have always been staunch supporters of hospital charities but to KING EDWARD VII. belongs the credit of creating an institution which will redound to the glory of his reign. The President of this Fund is His Royal Highness the PRINCE OF WALES and since its formation it has distributed the sum of £513,326 to hospitals and convalescent homes. Last year £100,000 were distributed. It will be remembered that an anonymous donor to the Fund offered to give a sum of money which would increase the permanent income by £4668 a year provided that twice this amount was raised before the end of 1904. That condition has unfortunately not been fufilled, probably because, as the PRINCE OF WALES pointed out at a general meeting of the Fund held on

Dec. 19th, the demand upon the purse of charity has been so large this year At the present time there are appeals for more than £1 000,000 in connexion with hospitals in London The amount available for distribution by KING EDWARD'S Hospital Fund this year is £80,000, which includes £1000, intrusted to the Fund by the London Parochial Charities for allotment to convalescent homes The League of Mercy contributed £14 000 Some uneasiness has been felt as to the use which hospitals make of the money given to them by the various hospital funds and as a consequence a committee has been appointed by KING EDWARD'S Hospital Fund to inquire into the matter This committee consists of Lord WILLIS, Sir EDWARD FRY, and the Bishop of STEPNEY The work of the

Metropolitan Hospital Saturday Fund

steadily maintains its progress, the income to Dec 17th being £17 346 as compared with £16 925 on the corresponding date of last year It is interesting to note the progress that the Fund has made since the abolition of the street collection in 1897 In that year £20,138 were collected including £3330 from street boxes The authorities state that the Fund has now more than recovered the loss incurred by the abolition of the street collection and has distinctly increased in public favour The main income of the Fund is derived from the penny a week collections in the work shops and places of business in London A special department has been created for the supply of surgical appliances upon payment by the patients of over 50 per cent of the net cost More than 4300 instruments are annually provided by this department under the supervision of a special committee assisted by competent surgeons and fitters Towards the cost of these appliances the patients contribute over £2000 Special arrangements are also made for sending men, women, and children to convalescent homes when recommended for such benefit by a medical man Some 1503 patients were so sent during 1903 *many on the part pay system, nearly £860 being paid by the* patients or their friends towards the cost of their maintenance Another special department of the Fund is the ambulance department, by means of which men and women are trained to render first aid in cases of accidents in the work shops or in the streets, but mostly in the workshops, and in cases where the employes of the firm subscribe £5 per annum to the Fund and include a man or woman holding a first aid certificate of the St John Ambulance Association they are supplied on loan with completely fitted ambulance boxes The awards for 1903 amounted to £21 183 as against £20,902 in 1902 The awards for 1904 will not be decided till Jan 21st, 1905

SANITATION IN AMERICA

In the autumn of the year we commenced a series of articles written by our Sanitary Commissioner during his recent visit to the United States of America First, he showed that though sea sickness could not be altogether avoided, its frequency and severity might be considerably reduced by the size and build of the ship The slow and large ships were preferable to the smaller very rapid but narrower vessels *It does not appear* from the letters received that in America either the laws or the methods of administration are in any way superior to our own, but in *matters of detail* there is something to be learnt The organisation, for instance of the municipal bacteriological laboratory at Boston is very ingenious and there is some thing to be said in favour of their system of dealing with certain infectious diseases Notification is obligatory but no payment is made to the medical practitioner for such notification On the other hand, all the necessary bacteriological work is done for him gratuitously and in giving his notification of the existence of such diseases as diphtheria typhoid fever, and tuberculosis, he acts not only on his own responsibility but in consequence of the opinion expressed by the experts employed at the bacteriological laboratory Throughout the town as various druggists there are depots of little cardboard boxes containing all that is necessary for collecting specimens These, therefore are uniform and the medical practitioner can obtain them from the nearest druggist, who also undertakes to return them to the laboratory when used Thus the work is done with a minimum amount of trouble for the medical practitioner and great regularity and uniformity for the public health authority

In regard to other matters, especially the water-supply of *Philadelphia Washington Pittsburg* and Allegheny, there is much to criticise and to denounce The water is derived from the nearest river or rivers and at no great distance from *the towns in question Above the intakes there are other* towns and they drain into the rivers, so that these water supplies contain a considerable amount of sewage In these circumstances it was only natural to expect that such important and wealthy communities as those which inhabit the towns mentioned would have taken great care to filter or otherwise to purify the water As a matter of fact, the inhabitants of Pennsylvania have placed next to godliness not cleanliness but sabbatarianism They have been much more concerned in enacting prohibitive laws against the drinking of alcohol especially on Sundays than in securing clean water They pour their own crude sewage into the rivers and they drink the crude sewage which other towns have emptied into these same rivers The prevention of public amusements on Sundays seems to them to be much more important than the prevention of the pollution of rivers. The consequence is the endemic prevalence of typhoid fever and the occasional outbreak of very severe epidemics of the disease *At Philadelphia for instance, in the month of* April last as many as 300 new cases of typhoid fever were notified in the course of one week The census of 1900 sets down the population of Philadelphia at 1 293 700 and there were during that year 8701 cases of typhoid fever notified, resulting in 957 deaths On Sunday it is not possible to get anything else to drink but water Surely before thus rendering water drinking obligatory, care should have been taken to provide a supply of pure water The drinking of alcohol in excess is undoubtedly most mischievous, but the laws which have helped to spread typhoid fever by forcing people to drink contaminated water have not prevented drunkenness At Pittsburg the average annual death rate from typhoid fever during the ten years ending 1900 was 90 11 per 100 000 inhabitants and the inhabitants are so far immune that the greatest number of cases occur when trade is sufficiently prosperous to attract a large number of strangers to the town At Washington and at Philadelphia filtering works are in hand but at Pittsburg and Allegheny such measures are only talked about and nothing definite has been decided

From St Louis our Commissioner sent us some account of the great World's Fair This seems to have been so big that it even contained lonely places of such vast dimensions that a train which crossed them was held up by masked brigands and the passengers were duly relieved of the valuables which they happened to have with them Where the crowds did gather there was much rowdyism, as the wounds treated at the emergency hospital testified For instance, one lady was shot through the nose and a gentleman received five revolver bullets in his body and this occurred not in the backwoods but on the exhibition grounds Such cases were frequent and the seven surgeons engaged at the emergency hospital were hard at work all the time There were some very fine exhibits at St. Louis, notably those of the German Empire and of Japan The Americans themselves lost many opportunities of showing what the States and municipalities have done Indeed, it does not seem as if

these administrative bodies have that sense of responsibility and that pride in their work that is so evident in the old countries of Europe. The scandals which have occurred, notably at St. Louis itself, explain in a measure this indifference. But they do not explain the apathy of the populations who will not take the trouble to govern themselves and are content to elect men of doubtful character who look upon administration not as a question of duty and of honour but as a money-making business. It is to be hoped that as at St. Louis some of these individuals have been caught red-handed and are now languishing in jail there will be some radical improvements in the near future.

SANITATION ABROAD.

Malaga.

The series of articles on Spain which followed upon the description of the Fourteenth International Medical Congress, held at Madrid in 1903, were concluded in the month of January this year. We then published an illustrated account of Malaga, a town which possesses many of the qualities necessary to constitute a good winter resort. Here, even on wintry nights, the thermometer rarely falls to 50° F., and on an average the rain does not fall for more than 30 days in the year. On the other hand, the sanitation of the older parts of Malaga and the death-rate there recorded are anything but inviting. There are, however, beautiful outskirts or suburbs to the town of Malaga which constitute a sort of Spanish Riviera, developing along the sea shore where villas stand in their own gardens well away from the evil miasma of the old and historical town.

Compulsory Vaccination in France.

Passing from Spain to France we gave an analysis of the new French Public Health Act which has now come into force. This law is particularly interesting because it not only renders vaccination obligatory but it also enforces re-vaccination. Every inhabitant of the country, and no exception is made in favour of foreigners, must be vaccinated three times—that is, during the first, the eleventh, and the twenty-first years of life. Before the adoption of this law vaccination was not obligatory, though it was very general. For instance, all soldiers had to be vaccinated and all able-bodied males had to be soldiers. Again, all pupils in schools had to be vaccinated and education is compulsory. Also railway companies and other large employers of labour refused to engage any workman who had not been vaccinated. Now these separate measures need not be taken, the State provides for all, and none can escape this obligation which he owes to himself and to the community. How the vaccination service is organised in both urban and rural districts was fully described, for it does not suffice to enact a law unless absolutely practical measures are also devised to insure its application. Parents and guardians, school teachers, and others have a measure of responsibility thrown upon them so that none shall escape the obligation. Public vaccinators are to travel round periodically in rural districts where the population is so small that it is not necessary to keep a depôt for vaccination open all the year round. In a word, the French legislature has thoroughly taken the bull by the horns and has enacted a measure that is complete and thorough in every particular, at least so far as compulsory vaccination is concerned.

Public Health Works in France.

But the new Public Health Act deals with many other questions. It establishes, for instance, the principle that wherever there is an exceptionally high death-rate the local authorities, and if they neglect the duty the central authority, shall proceed after holding an official investigation to draw up a scheme of improvement. Nor is this optional, it is obligatory. The municipalities will no longer be "invited" and "expected" to prepare drainage or water supply schemes, but will be ordered to do so by the Prefect. There is a whole hierarchy of authorities to which a scheme may be referred if its merits are disputed, but in the long run the Government has the power to order the necessary works to be taken in hand. If even then the local authority refuses to move the central government, acting through its representative, the local Prefect, can proceed to carry out the prescribed measures or scheme and recover the cost from the local revenues. The three great questions that occasion the most serious difficulties are the drainage of towns, the water-supply, and the insanitary areas or slum properties. Local politics and intrigues, the rivalries of interests and the fear of increasing taxation have always rendered action in these matters very difficult. The Prefect, however, is appointed by the central government. He is quite independent of mere local interests and influences and the new law makes him responsible in this sense that it is his business to see that the local administrative bodies do not defer and neglect the important measures on which the preservation of public health depends.

Feeding the Children in the Paris Schools

The question of physical degeneration has given a new impulse to the demand that more attention should be bestowed on the feeding of the children attending elementary schools. Harrowing stories are published from time to time concerning the many thousand children who go to school without breakfast. Ever since the disastrous war against Germany in 1870–71 the French nation has had good cause to give the utmost attention to this same question and in the month of September we published a full history and account of the wonderfully humanitarian way in which all the children were fed at the Paris elementary schools. The happy combination of voluntary work and municipal help has led to the best results. Every child, rich and poor alike, is fed. Those who choose to bring their lunch with them may do so. In that case all the teachers have to do is to see that what they bring is wholesome and sufficient. But no parent could supply meals as cheaply as the school canteens do. A private household must pay retail prices and cannot exercise a control equally rigorous and technically competent over the quality and wholesomeness of the food. Consequently it is now a rare occurrence to see a child bring his or her lunch from home. This meal is provided by the school canteen. It consists of soup, meat, and a separate dish of vegetables, such as haricot beans, macaroni, or pudding. The excellence of the cooking, the tasty character of these three courses, and the scrupulous cleanliness of the canteen were fully described, and yet the cost of these meals does not exceed an average of 1½*d.* each. In the wealthy quarters of Paris only 20 per cent. of the parents fail to pay the 15 centimes charged. In the poorest quarters the proportion of meals given gratuitously amounts to 70 per cent. The children are never allowed to suffer for the faults or the poverty of their parents. If they come to school in rags they are clothed at the public expense not so much to keep them warm as to prevent their feeling any sense of humiliation in the presence of more fortunate schoolfellows. To their food such medicaments as cod-liver oil is added when necessary and the municipality gives whatever subventions are required so that every child in Paris shall be fed and fed in such a manner as to preserve his or her sense of dignity and self-respect.

THE SANDGATE SCANDAL.

The agitation against what are known as JONES'S Homes at Sandgate has been pressed forward energetically this year. We had already published a very full account of these establishments.[1] Fortunately, the Royal Institute of Public

[1] THE LANCET, August 22nd, 1903, p. 565.

Health elected to hold its annual congress at Folkestone and among numerous other subjects set down for discussion Dr. NATHAN RAW of Liverpool promised a paper on "Sanatoria for Consumptives." This was an opportunity that could not be, and was not, lost. In view of the forthcoming debate we published lengthy descriptions of what had been done on the continent, and notably in Germany, for that country has taken the lead in such matters. Mr. LONG, in the House of Commons, had said that a consumptive patient was more dangerous to the public when not confined in a home. This being the opinion of the Government it became a matter of urgency to define clearly what constituted a home for the treatment of pulmonary tuberculosis and thus to render it very evident that the JONES'S Homes did not provide those conditions. Passing in review the best known and most important sanatoriums in existence we demonstrated that a properly constructed sanatorium would probably cost at least £200 per bed and from 25s. to 30s. per week per patient. The late Mr. JONES stated that he provided 126 beds for tuberculous patients at Sandgate. The recently built popular sanatorium at Borgoumont for the poor of the province of Liège, Belgium, cost £52,000 and yet it only contains 114 beds. The private ordinary dwelling-houses in the main street of Sandgate where the patients are kept for from £1 1s. to £2 5s. per week cost but a few hundred pounds each. Proper homes may be provided with suitable food and treatment for those who can afford to pay £3 3s. and more per week. This cannot be done for pauper patients at £1 1s. per week and still less can a profit be made out of such a transaction. But the JONES'S Homes are run exclusively for profit and as they yield a profit they cannot at the price be made to supply what is necessary for the patients. In no case to our knowledge are popular sanatoriums established on a commercial basis by unqualified laymen with a view to realise profit on invested capital. The greatest and most numerous sanatoriums are those which the German Empire has organised in connexion with the law on compulsory insurance. In these institutions some 30,000 patients are treated annually at an average cost of £17 15s. 4d. each, or 4s. per day for working expenses. As a result some 7000 workers are completely restored and some 20,000 more are so benefited that they are able to return to their work for two or three years. The profit is not on the £17 15s. 4d. that the insurance funds disburse for the treatment of these patients but it consists of the benefit the community derives from the work the patients do after they have been definitely or temporarily cured. When this subject came up for debate at the Folkestone Public Health Congress Dr. RAW said that the incapacity to work caused by pulmonary tuberculosis cost London over £4,000,000 per annum and he had calculated that the working classes of Liverpool lost annually in wages through being invalided by this disease at least £300,000. He maintained that pulmonary tuberculosis was infectious, was curable, and that sanatoriums constituted the best means of effecting such cures. The upshot of the debate that followed was that in any case such sanatoriums so-called as existed two miles away at Sandgate were a menace to the community and therefore the following motion was adopted: "That homes or sanatoriums for the aggregation and treatment of tuberculous patients should stand in their own grounds in an isolated position away from the general population and be placed under the absolute control of fully qualified medical practitioners." At Sandgate JONES'S Homes are in the main street, have no garden or grounds round them, and were managed by unqualified laymen. The persistent publicity given to this grievance has so strengthened the movement against these homes that the Sandgate urban district council is about to introduce a Bill into Parliament so as to acquire the powers necessary to deal with the question.

THE BENEVOLENT AGENCIES OF THE PROFESSION.

Epsom College.

The Royal Medical Foundation of Epsom College has maintained its full number of pensionerships and foundation scholarships during the year. 69 aged medical men, or the widows of those deceased, have received pensions of £30, of which number 50 have been met out of the general funds of the charity; 14 pensioners have had an addition of £20 under the Da Silva foundation and three aged daughters of medical men have received pensions of £20. 11 daughters of medical men, chiefly orphans, have been maintained at the school of St. Anne's Society and 50 foundation scholars, sons of necessitous medical men, have been educated, boarded, and clothed free of charge at the College, Epsom. To maintain the benevolent side of the institution a sum of £6000 has to be collected annually but this year a very much larger sum will be required as a sudden breakdown in the drainage of the College, which was laid 50 years ago, has necessitated the re-laying of a large portion. As this outlay will seriously threaten the ability of the Council to continue the present number of pensionerships and foundation scholarships the treasurer has recently issued a special appeal for help, a copy of which appeared in THE LANCET of Dec. 10th. The College accommodates 250 scholars and there is a lower school which will take 100 junior boys. There are three laboratories—chemical, physical, and biological—a lecture theatre, a carpenter's workshop, a valuable library, a gymnasium, a large swimming bath (which was recently reconstructed at a cost of £1000), a chapel providing 380 seats, and a sanatorium. There are also extensive playing fields covering over 20 acres. Owing to the generosity of the hospital authorities there are nine medical scholarships at the hospital schools in London ranging in value from 120 guineas to £150; and more than 17 scholarships, varying in value from £15 to £60, are awarded, the majority of them annually, several being tenable for three or four years. The fee charged for those not the sons of medical men is 75 guineas, but sons of members of the medical profession are entitled to a reduction of £10 10s. There are entrance scholarships of £30 a year and several "council exhibitions" for the sons of less fortunate members of the profession which reduce the fee to 35 guineas. We once again urge all members of the profession to contribute a little towards the good work carried out by the foundation attached to the College and would repeat that an annual subscription of 5s. from every medical man would place the financial condition on a sound footing. The benefits are not restricted to Great Britain and at the present time there are pensioners in Africa, Australia, and France. Last year we referred to the zealous way in which the treasurer, Sir CONSTANTINE HOLMAN, had worked on behalf of the College and it is gratifying to know that his unwearied labours have been recognised in three widely different ways this year. His Majesty the KING has conferred upon him the honour of knighthood; the British Medical Association has awarded him its gold medal for distinguished merit; and a large sum has been subscribed by members of the profession to build a reading and art room at Epsom College as a permanent memorial of his labours in the interests of the profession.

British Medical Benevolent Fund.

During the year this fund has paid £2381 to its annuitants, who now number 124, and has given away £1533 as temporary help to 137 persons, all in great distress. Owing to the general depression subscriptions and donations to the grant department decreased to such an extent that at the July meeting there was no balance at the bank and no less than 22 urgent and deserving applications had to be passed over. The committee pleads earnestly for increased support and

small subscriptions are thankfully received. The accounts are audited every year by a well-known firm of chartered accountants and the working expenses are only just over 5 per cent., although all the annuities and most of the grants are paid by monthly instalments. A report will gladly be sent on application to the honorary secretary, 11, Chandos-street, Cavendish-square, W.

Society for the Relief of Widows and Orphans of Medical Men.

During 1904 54 widows and 15 orphans received grants amounting to £3308 10*s.* from the Society for the Relief of Widows and Orphans of Medical Men, 11, Chandos-street, Cavendish-square, W.

THE LANCET *Relief Fund.*

This fund, which exists for the purpose of affording immediate pecuniary assistance to medical men or their widows and orphans in cases of distress and emergency by grants of money on loan free of interest or by gifts, has assisted some 22 persons during the past year, involving an expenditure of £266. As the accounts are not made up till the end of the year there is a probability that these figures may fall short of the actual totals.

CONTRIBUTIONS FROM THE LANCET LABORATORY.

The contributions from THE LANCET Laboratory have, as in the past, related to many interesting questions bearing upon public health. In THE LANCET of Jan. 30th, p. 323, appeared a special article on some points concerning natural mineral waters, in which the question of the therapeutic superiority of such waters compared with those artificially prepared was discussed. One of the most popular waters supplied to the public is Apollinaris water, in regard to which attempts have been made to disqualify this water as of natural origin. In spite of the failure of these attempts the proceedings still left a prejudice in the minds of not a few. We thought the matter worthy of practical investigation by our Laboratory Commissioners who subsequently visited the springs and found that for all practical purposes Apollinaris water as contained in bottle in the open market is identical with that drawn from the spring at Neuenahr in Germany. In a number of analyses given by our commissioners of the water taken by themselves from the spring and of the water contained in the bottles on the market the results were seen to be substantially the same. In the bottling process the composition of the water is not interfered with except in one trifling regard, and that is that a small quantity of salt is added to prevent the formation of sulphuretted hydrogen in the water from the sulphates which it naturally contains.

In THE LANCET of Feb. 6th, p. 381, attention was called to the frequently filthy state of the coins of the realm arising from their contact with more or less dirty trades. The offensiveness in particular which frequently characterises bronze coins that have been through the hands of butchers, publicans, fried fish salesmen, and others was pointed out. The bronze and silver coin handed in bulk to the banks in the environment of Billingsgate or Smithfield, or even Covent Garden, is often in a most disgusting state and it is handed back again to the public in the same revolting condition. It was suggested that where large parcels of coins are received smeared with filth they might be cleansed before being distributed again to the public. Our views gained considerable publicity in the lay press and we subsequently learned that some of the banks had adopted a simple method by which dirty coins were washed.

By request of his Excellency the Turkish Ambassador we submitted to analysis a sample of mineral water the source of which is a spring in the district Kara-hissar-i-Sahib in the province of Broussa in Asia Minor. The water has been employed in the Hamidié Hospital for Women and Children at Constantinople and is said to have been given with good results in chronic gastric affections, in bronchial catarrh, and also in affections of the bladder—e.g., cystitis. In our analysis we found that the water contained sodium carbonate, calcium carbonate, sodium chloride, and borax, to which alkaline salts as well as some lithium the favourable action in the above affections of the water may be referred.

In THE LANCET of May 28th, p. 1521, it was pointed out that the supply of pure ice in this country for domestic purposes was not as abundant or available as it should be and our remarks were generally upheld in a discussion which took place in the press. It appears that the main reasons why more ice is not consumed in this country are, an unreasoning prejudice against its use, the initial cost of the ice-safe and the ice to the consumer (although that is soon repaid by the saving of food which otherwise would be wasted), and the difficulty in many places of obtaining small supplies regularly. In a word, if the demand were created the supply would soon be forthcoming. The demand, however, does not exist to any extent, as apparently the public do not seem to realise the unquestionable advantages of ice in the preservation of food.

The results of the labours of THE LANCET Special Analytical Commission on brandy have borne abundant fruit during the year. Quite a campaign throughout the country has been undertaken against the sale of spirit called brandy which in reality is not brandy and many important convictions have been obtained. The most striking instance was the case which was heard in the North London police-court at the instance of the authorities of Islington Borough. This was regarded as a test case the hearing of which occupied several weeks and a conviction was obtained, Mr. FORDHAM, the magistrate, delivering a well-considered judgment in which he showed a clear grasp of the technical points involved, his decision being completely in harmony with common sense. There is no doubt that considerable misrepresentation is practised in connexion with the sale of other spirits and in one case in particular an attempt was made to prove that a sample of rum supplied was not genuine Jamaica rum. As a matter of fact, one of the witnesses for the defence admitted that the sample was not pot still spirit, as is genuine rum, but was obtained in the patent still. The magistrates even on this clear evidence failed to convict. We pointed out again that the practice of substitution and of fraudulent misrepresentation in the spirit trade demanded a serious system of control and it would appear that the Sale of Food and Drugs Act needs strengthening in order to deal effectually with this system of fraud. In the interests of public health it seems highly desirable also, as was only too well illustrated in the case of the contamination of beer by arsenic, that a special officer should be appointed by the Local Government Board to make inquiries into the processes of manufacture of foods and drinks in this country and also to obtain information concerning foods and drinks made and imported from abroad.

In THE LANCET of July 9th, p. 97, we published a recent analysis of the strawberry made in THE LANCET Laboratory. The popularity of this fruit furnished a reason for ascertaining its composition. It was shown that the colouring matter of the strawberry contained iron in an organic form and that the mineral salts contained quite a large proportion of potassium and that the strawberry is remarkably soluble in weak alkaline solution. Nearly 90 per cent., however, of the fruit consists of water. There was no reason for thinking, according to these results, that the strawberry should be forbidden to sufferers from gout seeing that its richness in certain salts would tend to render the blood alkaline and to lower the acidity of the excretions.

In THE LANCET of Oct. 29th, p. 1231, we referred to the unguarded state of many of the reservoirs containing the

public water-supply in this country. We urged that the approaches to a water-supply should be strictly guarded and that the reservoir itself should be bounded by an unnegotiable fence. As a matter of fact an occurrence at Kingsbridge illustrated the fact that exposed water-supplies may prove to be the medium of a diabolical cowardly attack. The new water-supply there had been found to contain carbolic acid and naphthalene which had apparently been thrown in by some wickedly disposed person.

In THE LANCET of Nov. 5th, p. 1303, we had occasion again to allude to the dangers of celluloid. It was urged that all celluloid articles should be marked with the words "highly inflammable" or that a caution should be printed upon them that they must not be heated or placed near a flame or fire.

In the same number of THE LANCET we referred to the use of perchloride of mercury for preserving timber. Considering the volatile nature of mercurial compounds we expressed the opinion that on the whole their use for preserving timber intended for building domestic dwellings at any rate is undesirable, especially as other agents much less poisonous than mercuric salts are probably just as effective in arresting or preventing the attacks of dry rot. Properly seasoned timber, however, requires no such treatment and it is dampness which is favourable to the invasion and growth of dry rot.

In THE LANCET of Nov. 19th, p. 1436, we referred once more to the question of the quality and purity of bread. Modern methods are directed simply in the preparation of the flour to the appearance of the loaf without any regard to the depreciation in food value which the loaf sustains during the process.

In THE LANCET of Nov. 26th, p. 1514, we appealed again for a law which shall enable the public to purchase what they ask for and our remarks were based in this instance on the attempt to deceive the public by qualifying foreign meat as "British killed," "killed in England," "home killed" and so forth. It is time that the country protected the public in this matter so that when British home-fed meat is asked for it should be supplied.

A recent analysis of the chestnut was made in THE LANCET Laboratory and the results were published in THE LANCET of Dec. 3rd, p. 1531. It was shown that weight for weight the chestnut was decidedly more nutritious than the potato, though in many respects there was a resemblance between the two. It was pointed out that the chestnut is a particularly economical form of food, as a given area of ground, it is stated, produces the maximum amount of food possible where it is planted with chestnut trees and it seems a pity that the chestnut is not more appreciated in this country as a source of food than it is.

The number of samples of foods, drugs, and other articles examined in THE LANCET Laboratory and reported upon in our Analytical columns was 108 and the number of analyses made was 519. The number of analyses made in special inquiries was 105, bringing the total up to 624, which is slightly in excess of the figures recorded last year.

THE ORGANISATION OF THE PROFESSION.

At the commencement of the year we had occasion to describe in detail the satisfactory progress accomplished at Southampton. The first attempt to organise the members of the profession in this town was made in the commencement of the year 1902. The Southampton Provident Medical Association was then created. This organisation is both a medical union and an attempt to provide the poor with medical aid without the intervention of any middle party or speculator between the medical attendant and the patient. 49 out of the 57 local practitioners joined the medical union. The provident organisation established by the medical men themselves, while preventing abuse, also raised the subscription to 1½*d.* per week. Nevertheless, some 7000 persons who used to pay only 4*s.* a year to insurance companies and other medical aid clubs or societies now pay 6*s.* 6*d.* direct to their medical attendants. The members of the profession have lost some of their old patients through the change; but, at the superior rate of payment that they now receive, their incomes have increased, though they have less work to do, having fewer subscribers on their lists. Many abuses still remain at Southampton though a great step forward has been accomplished. In Manchester a large section of the local practitioners is organised and their union is called the Medical Guild. The surrounding population is so vast, amounting to about 10,000,000 within an hour's railway ride from Manchester, that the work of organisation is most complex and difficult. What will suit one district does not meet with the requirements of another. For instance, coal miners and cotton-spinners work under very different conditions. On the other hand, the spirit of organisation is strongly developed throughout the whole country and the members of the Medical Guild have wisely appealed to the trade unions for support and cooperation. Consequently we were able to describe how the important and widespread Tramway Workers' Association stood by the Medical Guild and refused to accept the services offered at 3*s.* 6*d.* and even at 3*s.* a year by medical men who had not joined medical organisations. These tramway servants preferred to pay 4*s.* 4*d.* a year so as to secure the aid of medical officers who belonged to the medical union. The Manchester Medical Guild has also done good work in checking any tendency to canvass or to tout and its publications serve a useful purpose in exposing abuses. Pressure is also brought to bear on local authorities so that the principle of being model employers should apply not only where workmen are concerned but also when the services of medical men are required. In the Pendlebury coal-mining district the guild was able to assist in a struggle which occurred. There a dispute arose between the employers and a miners' society as to the payment of the surgeons' fees in cases of accidents and for a time it seemed as if the medical attendants would not be paid at all. Fortunately, as the colliery surgeons were united they could bring pressure to bear and present their demands in a clear and unanimous manner. It was decided that the funds collected by the workmen should serve for sick allowance and those collected by the employers would be devoted to pay medical fees. Then the rule was firmly established that cases requiring surgical treatment should be paid for at the rate of 15*s.* each, it being especially stipulated that this should include all the cases of minor surgery, for it is only on the average of cases that the small sum of 15*s.* becomes remunerative. From other parts of the country, notably from Northumberland and Durham, the news received indicates steady progress in the work of grouping medical practitioners, so that they should form strong unions for the defence of their economic interests and maintain the highest standard of medical ethics.

HONOURS TO MEDICAL MEN.

If the number of honours bestowed upon medical men during any one year were an accurate index of the work done by them on behalf of the country in general and to the benefit of the world at large we should deplore in a much greater measure than we do the paucity in the list of those who have been awarded honours during the past 12 months. But as on the field of battle many heroes fail to attract the notice of their commander, either from the nature of the heroic act or from the modesty of the hero, so it must necessarily be in the vaster area that constitutes the field on which the battle of life is fought. To those medical men who have been marked out by the Crown for distinction we

offer our sincere congratulations which we know are shared by the whole of the profession and by very many members of the public in all stations of life.

Birthday Honours.

Since the accession of the KING no list of New Year honours has been issued, nor is it probable that the practice will be resumed as HIS MAJESTY'S birthday comes so near to the end of the year. But the Royal natal day is now celebrated twice a year—in London on June 24th and at foreign stations on Nov. 9th, the extra list of honours thus compensating for the loss of the New Year's list. The June list included the names of Dr. T. STEVENSON, Dr. C. HOLMAN, and Dr. KENDAL FRANKS, C.B., who each received the honour of knighthood. Sir THOMAS STEVENSON, scientific analyst to the Home Office, is a lecturer on medical jurisprudence at Guy's Hospital, examiner in forensic medicine at the University of Birmingham, and analyst to several counties and boroughs. His excellent contributions to the standard literature of forensic medicine and hygiene are known to all our readers. Sir CONSTANTINE HOLMAN has worked very hard in connexion with the beneficent and educational work of Epsom College as treasurer and vice-president and is well known to all our readers. How well his services are appreciated is shown under the heading of *Epsom College* (p. 1877). Sir KENDAL FRANKS is Principal Medical Officer to H.M. Forces at Capetown. An interesting feature of this list was the decorations awarded in commemoration of the jubilee of the Crimean war. Among the recipients were Surgeon THOMAS LIGERTWOOD (retired pay), late physician and surgeon to the Royal Hospital, Chelsea, who was made a Companion of the Bath in the Military Division. He served at Alma, Inkerman, and Sebastopol. Among the Knight Commanders of the same order were Deputy Surgeon-General JAMES HOWARD THORNTON, I.M.S., and Surgeon-General EDMOND TOWNSEND, A.M.S., C.M.G., both of whom are promoted from the Companionship of the Bath. Surgeon-General WILLIAM JAMES FAWCETT, A.M.S., was made a Companion of the Bath in the Military Division and Hon. Colonel JOHN EDWARD SQUIRE, lately commanding the Home District of the Royal Army Medical Corps (London Companies) Volunteers, a Companion of the Bath in the Civil Division. Mr. BOLTON GLANVILL CORNEY, M.R.C.S. Eng., Chief Medical Officer of the Colonial Government at Fiji, was appointed a Companion of the Imperial Service Order. In the list issued on Nov. 9th four members of the medical profession received the honour of knighthood—viz., Mr. CHARLES H. MARRIOTT, Mr. SHIRLEY F. MURPHY, Professor WILLIAM JAPP SINCLAIR, and Major ALLAN PERRY, R.A.M.C. Sir SHIRLEY F. MURPHY in his capacity of medical officer of health to the administrative County of London has rendered services to the metropolis the value of which it would be hard to estimate adequately, services which not only add to the comfort and well-being of the present inhabitants of the capital of the British Empire but which must of necessity have an important bearing upon the health of generations yet unborn. The influence of his work has extended throughout the kingdom. As a member of the Royal Commission upon Tuberculosis he rendered expert aid to an inquiry of the first importance, while his annual reports to his authority, as well as to the Local Government Board and the Home Secretary, on sanitary subjects have been models of practical sense. Sir WILLIAM JAPP SINCLAIR is professor of obstetrics and gynæcology at the University of Manchester and is a valuable member of the Midwives Board. Sir ALLAN PERRY is the principal civil medical officer and inspector-general of hospitals of the island of Ceylon and principal of the Ceylon Medical College. Sir CHARLES H. MARRIOTT has done valuable work as surgeon to the Leicester Infirmary and is the founder of the nursing institution connected with that charity.

Tibet.

Lieutenant-Colonel LAURENCE A. WADDELL, C.I.E., I.M.S., has been appointed a Companion of the Bath in the Military Division in recognition of services in connexion with the recent mission to Tibet.

Foreign Orders.

During the year the KING of GREECE conferred the Gold Cross of the Royal Order of the Saviour upon Sir WILLIAM BENNETT, K.C.V.O., and the KING of the BELGIANS bestowed upon Dr. A. S. GUBB the Civic Cross of the First Class for services rendered by him as honorary medical officer of the Société Belge de Bienfaisance de Londres. Dr. DONALD HARVEY ATTFIELD, director and principal medical officer of the Suez Quarantine Office, has had conferred upon him the Imperial Ottoman Order of the Osmanieh, Fourth Class, by His Highness the KHEDIVE of EGYPT.

Royal Victorian Order.

In connexion with the visit of the KING to Copenhagen Professor THORVALD SAXO VIGGO PETERSEN, physician-in-ordinary, and Professor JENS SCHOU, surgeon-in-ordinary, to the KING of DENMARK, were made Honorary Commanders of the Royal Victorian Order, and Dr. CHRISTEN MARTIN WITTÜSEN LE MAIRE, resident surgeon to the KING of DENMARK, was appointed honorary member of the Fourth Class of the same Order. His Majesty has during the past 12 months made the following appointments to the Order: Dr. JOSEPH KERZL, physician-in-ordinary to His Imperial Majesty the EMPEROR of AUSTRIA, King of Hungary, Honorary Commander, and Dr. GUSTAV HENRY ANTON BESOLD, director of the Falkenstein Sanatorium, Honorary Member of the Fourth Class.

OBITUARY.

With the close of another year we again make up the tale of those members of our profession who have gone to rest after their work in this world. Many they are and of all ages, but one and all have spent their time in the relief of suffering and in the furtherance, if only by a little, of knowledge. After our usual custom we have classified them as follows; this year we have no death in the Royal Navy Medical Service to record.

Army Medical Service and Indian Medical Service.

Sir GEORGE THOMPSON, K.C.B., M.B., C.M. Aberd., died suddenly in his sixtieth year on Dec. 21st, 1903. He was educated at Aberdeen University and graduated M.B. in 1864, soon after which he entered the Indian Medical Service, in which he remained for 30 years. He served through the Afghan war of 1878–1879 and was mentioned in despatches. He also served in the Chitral and Terah expeditions, being made a K.C.B. for his services in the latter. JOSEPH RABUTEAU WELLAND, M.D. Dub., who was killed on Jan. 11th, 1904, in the battle of Jidballi, Somaliland, was born in 1878 and was educated at Rossall School and at Trinity College, Dublin. He joined the Royal Army Medical Corps in 1901 and was immediately sent to Somaliland, being invalided home in April, 1903. In November of the same year he returned to Somaliland and met his death early in the following year, being speared while attending to the wounded. Deputy Surgeon-General H. CAYLEY, C.M.G., F.R.C.S. Eng., I.M.S., who died on March 19th in his seventieth year, was educated at King's College and received his medical education at King's College Hospital. In 1855 he received the diploma of M.R.C.S. Eng. and then entered the Bengal Army as assistant surgeon. He served through the Mutiny and after the conclusion of hostilities was appointed to the chair of ophthalmology in Calcutta Medical College. This appointment he held for many years and on retiring from the Bengal army in 1887 he returned home. His after career, which included the holding of a professorship at Netley and valuable service in the Boer war of 1899–1902, was fully set forth in the notice of his life

which appeared in THE LANCET of April 2nd GEORGE COCHET CHESNAYE, M R C P, F R C S Irel, Surgeon-Colonel I M S, who died on April 12th, was educated in Dublin and entered the Bengal Medical Service in 1859 He served at Mian Mir and Amritsar during the cholera epidemic of 1861 and through the Afghan war of 1878 In 1894 he was awarded a pension for distinguished and meritorious service JOHN RUNTON, M D Aberd, who died on August 12th, was educated at Aberdeen University, graduating as M B in 1869 Soon afterwards he entered the army as assistant surgeon, being attached to the 17th regiment He served in India in the Afridi campaign of 1877 and returning home retired from the army He then practised for 21 years at Blackburn, being consulting surgeon to the Blackpool Infirmary JAMES JAMESON, M D, Glasg, C B, K H S, LL D, late Director General A M S, was born in 1837 He was educated at the University of Glasgow and entered the Army Medical Service in 1857 For nearly 11 years he served in British North America and afterwards in Trinidad, where he worked through the epidemic of yellow fever in 1869 His next service was with the English ambulance during the Franco Prussian war of 1870, then he served in the Bahamas, and afterwards in India He then served as principal medical officer on the staff of Lord FRANKFORT in Egypt from 1889 to 1893, becoming in that year "personal assistant or what is now known as Deputy Director General In 1897 he was made a C B and honorary surgeon to Her Majesty Queen VICTORIA Then came the Boer war in which JAMESON was responsible for the whole medical organisation We need not here go into the question of how every authority miscalculated the dimensions to which the campaign would extend, suffice it to say that Surgeon General JAMESON worked with his whole soul to supply deficiencies and that the Royal Commission reported "that in no campaign have the wounded been so well looked after as they have been in this" Nor need we do more than refer to the way in which Surgeon General JAMESON was treated by the Government He was retired and died from septic pneumonia on Sept 13th

Hospital Physicians and Surgeons

The hand of death has fallen heavily upon the members of the staffs of various hospitals during the past year and not merely on those full of years JOHN KNOWSLEY THORNTON, M B, C M Edin, who was for many years surgeon to the Samaritan Free Hospital for Women, was educated at Rossall School and at the University of Edinburgh He was while there house surgeon to LISTER and in 1873 came to London being elected to the staff of the Samaritan Hospital and also holding the post of assistant to the late Sir SPENCER WELLS in his private work Applying the principle of Listerism to abdominal surgery and being a very able operator with a great power of diagnosis he soon became an authority in all branches of abdominal surgery In 1898 he retired owing to failing health and eventually died on Jan 3rd ROBERT VICARS FLETCHER, F R C S, L R C P Irel, who died on Dec 17th, 1903, was at the time of his death resident medical superintendent of the District Asylum, Ballinasloe He was educated at Dr STEEVENS Hospital, Dublin and spent the whole of his professional life in the care and treatment of lunatics It was owing to his efforts that the Ballinasloe asylum was considerably enlarged and improved ROBERT MANSFIELD TAGERT, M D Glasg F R C S Irel, who died on Dec 27th, 1903, was educated at Glasgow University and was for some time medical officer to the Larney Baronial Fever and General Hospital He was in his ninety first year at the time of his death ROBERT JAMES BLAIR CUNYNGHAME, M D, F R C S, M R C P Edin, J P F R S Edin, who died on Dec 23rd, 1903, studied medicine in London, Prague, Berlin, and Vienna, and graduated M D of the University of Edinburgh in 1862 He held the posts of physician to the Royal Hospital for Sick Children, Edinburgh, and was also at one time resident physician to the Edinburgh Royal Infirmary. GEORGE EDMUND LEGGE PEARSE, F R C S Eng, L S A, who died on Jan 13th, was educated at Westminster School and at Westminster Hospital After leaving the hospital, where he filled the posts of house surgeon and house physician, he spent some time in Manchester at the Royal Infirmary Returning to London he became demonstrator of anatomy at his old hospital and finally assistant surgeon Four years before his death he retired from active work WILLIAM DONALD, M D Aberd, graduated at the University of Aberdeen as M B in 1873 For the next few years he held the post of resident surgeon at Chalmers's Hospital Thence he went to Colombo where he was district medical officer for some years and, returning to Banff, settled down there, being visiting surgeon to Chalmers's Hospital WILLIAM HUTCHISON, M D St And, L F P S Glasg, who died on Jan 23rd, served through the Crimean war as a civil surgeon He finally settled down in practice at Loughborough and for many years was on the staff of the Loughborough Hospital JAMES SMITH TURNER, M R C S Eng, L D S, died after a long illness on Feb 22nd He was one of the pioneers of dental reform and together with Sir JOHN TOMES was primarily responsible for the passing of the Dentists Act in 1878 He was educated in Edinburgh and was dental surgeon to the Dental Hospital and also to the Middlesex Hospital He was also founder of the British Dental Association Sir EDWARD HENRY SIEVEKING M D Edin F R C P Lond, who died on Feb 24th in his eighty seventh year, was educated partly in England but mainly on the continent at Berlin, although he studied medicine for two years at University College Hospital, London After graduating at Edinburgh he studied at Paris and Vienna In 1846 he returned to London and was in 1851 appointed physician to St Mary's Hospital The rest of his career was fully set forth in the obituary notice which appeared in THE LANCET of March 5th His departure will be deeply felt for long at St Mary's Hospital He received many honours having held amongst other posts that of physician in ordinary to the late Queen VICTORIA ALEXANDER DAVIDSON, M A, M D Edin, F R C P Lond, who died in his sixty sixth year on March 3rd, was educated at the University of Edinburgh and was for many years a prominent practitioner in Liverpool He was appointed honorary physician to the Liverpool Royal Infirmary in 1876, retiring in 1897, being then made consulting physician He was also professor of medicine at University College, Liverpool FRANK RENAUD, M D Edin M R C S Eng, was born in 1819 and graduated M D of the University of Edinburgh in 1844, becoming M R C S Eng in the same year He settled in Manchester and in 1845 was elected physician to the Ardwick and Ancoats Dispensary, now the Ancoats Hospital In 1848 he was elected honorary physician to the Royal Infirmary and with this last institution he maintained an unbroken connexion until 1903 JOSEPH PEARE RICHARDS, M R C S Eng, L S A Lond, who died suddenly on March 2nd, was educated at King's College, London, and qualified in 1863 Soon afterwards he was elected assistant medical officer at Hanwell County Asylum and on Dr MURRAY LINDSAY'S resignation Mr RICHARDS succeeded him as medical officer to the female side, which post he held for over 20 years Sir HENRY THOMPSON, Bart, M B Lond, F R C S Eng, who died at the advanced age of 84 years on April 18th, received his medical education first of all through apprenticeship to a practitioner in Framlingham He then proceeded to University College, London, qualifying as M R C S Eng, in 1850 In 1853 he was appointed assistant surgeon to University College Hospital His fame as an

authority on urinary surgery is world-wide and honours fell thick upon him. He was no mean artist in water-colour, a widely-read man, a novelist, an earnest advocate for cremation, an enthusiastic motorist, and a well-known social figure. He was one of the few members of the medical profession who have gained the Jacksonian prize of the Royal College of Surgeons of England on more than one occasion, the others being the late GEORGE CALVERT and the late RUTHERFORD ALCOCK. Sir PHILIP CRAMPTON SMYLY, M.D. Dub., F.R.C.S. Irel., whose death after a few hours' illness took place on April 8th, began his professional career by being apprenticed to his grand-uncle, Sir PHILIP CRAMPTON, who died in 1858. He was then transferred to the care of Professor W. H. PORTER. PHILIP CRAMPTON SMYLY qualified in 1860 and then studied in Berlin and Vienna. In 1861 he was appointed surgeon to the Meath Hospital, which post he held for 40 years. He was a great authority on the surgery of the mouth and throat and among other appointments was surgeon-in-ordinary in Ireland to the late Queen VICTORIA and honorary surgeon in Ireland to the KING. JOSEPH MAY, F.R.C.S. Eng., L.S.A., J.P., who died on April 10th in his ninety-seventh year, was born in Devonport. He served as a surgeon in the Russo-Polish war of 1831 and in 1832 commenced practice at Devonport, where he spent the rest of his life. He was for many years on the staff of the Royal Albert Hospital and he took great interest in municipal matters, being four times mayor of Devonport. AUSTIN MELDON, F.R.C.S., M.R.C.P. Irel., who died on April 28th in his sixtieth year, was for many years on the staff of the Jervis-street Hospital, Dublin, and in 1889 was President of the Royal College of Surgeons in Ireland. GEORGE RICHARD SAUNDERS, M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S. Eng., who died in New Zealand on Feb. 25th, received his medical education at Cambridge and at St. Bartholomew's Hospital. He settled at Wanganui, New Zealand, where he was for a long time on the staff of the hospital. Of his personal services to ourselves as special correspondent we have spoken elsewhere. ALEXANDER OBERLIN MACKELLAR, M.D. R.U.I., F.R.C.S. Eng., who died on June 15th, received his medical education at the Owens College, Manchester, and at the Manchester Royal Infirmary. He also studied at Queen's College, Belfast, and in London and Paris. He served as a surgeon in the Franco-Prussian war and in 1872 was appointed assistant surgeon to St. Thomas's Hospital. During the Russo-Turkish war he served as chief surgeon of the English ambulance and in 1886 he was made full surgeon to St. Thomas's Hospital. Shortly afterwards he was appointed surgeon-in-chief to the metropolitan police. JOHN BIRKETT, F.R.C.S. Eng., who died in July in his ninetieth year, commenced his medical education in 1831 by being apprenticed to BRANSBY COOPER. In 1844 he was elected F.R.C.S. Eng. and in 1849 assistant surgeon to Guy's Hospital. He held many offices at the hospital and at the Royal College of Surgeons of England, and in 1877 he was elected President of the last-named body. WILLIAM ALEXANDER MCKEOWN, M.D. R.U.I., who died suddenly on July 9th, was educated at Queen's College, Belfast, and graduated M.D. in 1869. He was one of the foremost ophthalmologists of his time and it was mainly due to him that the late Mr. GEORGE BENN founded the Ulster Ear, Eye, and Throat Hospital to which Dr. MCKEOWN was the first surgeon. Sir JOHN SIMON, K.C.B., F.R.S., M.D. Hon. Dub., &c., who died in July in his eighty-eighth year, began his career as assistant surgeon to King's College Hospital. But his life's work was connected with public health of the science of which it may be said that he and EDWARD CHADWICK were the founders. A full account of his labours appeared in THE LANCET of July 20th. Sir WILLIAM MITCHELL BANKS, M.D., LL.D. Edin., F.R.C.S. Eng., who died on August 9th, was educated at the Edinburgh Academy and at Edinburgh University. His first professional appointment was at Glasgow where he was a demonstrator of anatomy under ALLEN THOMPSON. In 1868 he went to Liverpool and in 1875 he was appointed assistant surgeon of the Royal Infirmary. He was particularly interested in cancer and chose that disease as affecting the breast for the subject of his Lettsomian Lectures delivered in 1900. THOMAS GILBART SMITH, M.D. Dub., F.R.C.P. Lond., who died suddenly on August 3rd, was educated at Trinity College, Dublin, St. Bartholomew's Hospital, and at Paris. He graduated as M.D. in 1873 and in 1878 was appointed assistant physician to the London Hospital. He was also physician to the Royal Hospital for Diseases of the Chest, City-road. Sir FREDERIC BATEMAN, M.D. Aberd., F.R.C.P. Lond., was educated in Paris and at University College, London. In 1850 he graduated as M.D and in 1864 he was made physician to the Norfolk and Norwich Hospital. Besides being an able physician he was widely read and a very capable linguist. WILLIAM LEE DICKINSON, M.D. Cantab., F.R.C.P. Lond., who died from pulmonary hæmorrhage in the month of September, at the early age of 40 years, was the son of Dr. W. H. DICKINSON and one of the ablest of the younger members of the profession. He was educated at Winchester, Cambridge, and St. George's Hospital, becoming assistant physician to the last-named institution in 1894. SAMUEL JOHN HUTCHINSON, M.R.C.S. Eng., L.D.S., died on Sept. 15th. He studied medicine at University College and at King's College Hospitals and at the Royal Dental Hospital. He took up dental surgery and was for 11 years assistant surgeon and surgeon to the Royal Dental Hospital, being afterwards lecturer in dental surgery and pathology. EDMUND CARVER, M.A., M.D. Cantab., F.R.C.S. Eng., who died on Sept. 7th, studied at University College Hospital and graduated M.B. in 1859. He was consulting surgeon to Addenbrooke's Hospital. HENRY CAMPION, M.R.C.S. Eng., who died in October, was one of the oldest and most respected members of the dental profession in the north of England. He was educated at St. Bartholomew's Hospital and qualified in 1856. He started in Manchester as a dentist and took great interest in the dental reform movement. He helped to establish the Victoria Dental Hospital of Manchester and was consulting surgeon to that institution. ANGEL MONEY, M.D. Lond., F.R.C.P. Lond., who died at Sydney on Sept. 2nd, was one of the most brilliant students of his time. He was educated at University College Hospital and qualified in 1879 and in 1885 he was elected assistant physician to the Hospital for Sick Children, Great Ormond-street, and two years later to a like post at University College Hospital. Failing health compelled his retirement from work and he sought rest in Australia. HERBERT WILLIAM ALLINGHAM, F.R.C.S. Eng., who died in November at Marseilles, was educated at University College School and at St. George's Hospital. He was the eldest son of the well-known surgeon Mr. WILLIAM ALLINGHAM and was himself one of the best known and most successful operating and consulting surgeons in this country. He became F.R.C.S. in 1887 and in 1894 was elected assistant surgeon to St. George's Hospital. In 1902 he was appointed surgeon in ordinary to the Prince of WALES and also surgeon to HIS MAJESTY'S household. At the time of his death he was only in his forty-second year. ACHILLE VINTRAS, M.D. St. And., M.R.C.S. Eng., who died on Nov. 9th, received his early education in Paris, coming to England in the early "fifties." He entered as a medical student at St. Mary's Hospital, becoming M.R.C.S. in 1858 and graduating as M.D. at the University of St. Andrews in 1859. In 1867 he founded the French Hospital, which started in a small building in Lisle-street, Leicester-square, the present commodious hospital in Shaftesbury-avenue being opened by M. WADDINGTON in 1890. Dr. VINTRAS will be sorely missed by his colleagues and by the French colony in London, whether rich or poor,

By the death of GEORGE VIVIAN POORE, M.D. Lond., F.R.C.P. Lond., which occurred on Nov. 23rd, the British medical profession sustained a severe loss. Dr. POORE, who was for many years on the staff of University College Hospital, professor of medical jurisprudence and also of clinical medicine at University College, was also greatly interested in practical sanitation. The garden of his country house at Andover was the scene of many successful experiments as to the disposal of sewage. A full account of his career appeared in THE LANCET of Dec. 10th. WILLIAM GEORGE VAWDREY LUSH, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng., who died on Dec. 7th, received his medical education at St. Bartholomew's Hospital, graduating M.B. in the University of London in 1865. He commenced practice in Weymouth and within a very few years was elected as honorary physician to the Dorset County Hospital, a post which he held for 32 years. He was an enthusiastic churchman and was a member of the Salisbury Diocesan synod. ARTHUR QUARRY SILCOCK, M.D. Lond., F.R.C.S. Eng., who died from appendicitis on Dec. 19th, was born in 1855, his father being an engineer. He was educated at University College, London, and at University College Hospital. In 1882 he received the diploma of F.R.C.S., having previously graduated M.D. of the University of London in 1880. He was at the time of his death surgeon to St. Mary's Hospital and to the Royal London Ophthalmic Hospital. An extended notice of his career appears at page 1895 of this issue. We have added to the list of those members of the medical profession who were on the staffs of hospitals the name of LOUIS LEOPOLD JENNER, M.A., M.B., B.Ch. Oxon., M.R.C.P. Lond., who was for some time superintendent of the clinical laboratory at St. Thomas's Hospital. He was educated at Marlborough School and at Trinity College, Oxford, and afterwards at St. Thomas's Hospital. Here it was that the clinical laboratory was fitted up under his care and guidance. In 1900, however, he took up research work at the Lister Institute and here while engaged on work with the toxins of the bacillus typhosus he contracted an attack of enteric fever, from which he died at the early age of 38 years in the month of June.

State and Municipal Officials.

JOHN STOTHERT BARTRUM, F.R.C.S. Eng., who died early in the month of March, was a well-known practitioner in Bath. He was surgeon to the Mineral Water Hospital which, however, was a nominal appointment and did not involve any surgery. But he was always to the fore in municipal affairs, being a Justice of the Peace, an alderman, and twice mayor of the city. THOMAS HUNTER HUGHES, M.R.C.S. Eng., L.S.A., who died on March 17th, was for 24 years coroner for South Carnarvonshire. His father and grandfather, both medical men, had held the appointment before him. He was educated at St. Bartholomew's Hospital and qualified in 1858. WILLIAM FOTHERGILL TUCKETT, M.R.C.S. Eng., L.R.C.P. Edin., J.P., who died in his eighty-seventh year, qualified in 1841. He practised in Bath but took special interest in municipal work, being a magistrate and an alderman and at one time chairman of the sanitary committee of the town council. Of Sir JOHN SIMON we have spoken elsewhere but we mention him again here as at one time having been medical officer of the Privy Council. CHARLES KELLY, M.D. Lond., F.R.C.P. Lond., who died on June 16th, was educated at King's College, London, graduating as M.B. in 1866. In 1874 he was appointed medical officer of health for the combined district of West Sussex which at his appointment had a population of 96,000. JAMES BURN RUSSELL, B.A., M.D., LL.D. Glasg., who died on Oct. 22nd, was educated at Glasgow and graduated M.D. in 1862. In 1872 he succeeded Dr. (now Sir) William Gairdner as medical officer of health of Glasgow. By that time Glasgow had decided that the health of the city needed at least the whole time of one man for its care. How the sanitary condition of the city improved may be read in the many pamphlets and reports which came from Dr. RUSSELL'S pen. In 1896 he was made medical member of the Local Government Board for Scotland. An earnest worker, it may be said of him as of WREN, "Si monumentum requiris, circumspice," if the Glasgow of to-day be compared with the city of 40 years ago. JOHN HARKER, M.D. Heidelberg, M.R.C.S. Eng., L.R.C.P. Edin., who died on Nov. 13th, was one of the oldest practitioners in the Manchester district. He was educated at Kendal and at the old Royal School of Medicine, Manchester. He was for many years medical officer of health of the borough of Lancaster. DAN ASTLEY GRESSWELL, M.D. Oxon. and Melb., D.P.H. Cantab., received his medical education at St. Bartholomew's Hospital. Soon after being qualified he took up public health work and about the year 1883 was for a time on the staff of the South-Western Hospital at Stockwell. He next visited Australia and on his return to England worked under the Local Government Board as inspector of various seaports with a view to prevent incursions of cholera. His final appointment was that of chairman of the Board of Public Health, Victoria, which post he held at the time of his death. Here, too, we may recall the memory of one who, although not a medical man, held for many years an official position of great importance to the medical profession—namely, EDWARD JAMES ALFRED TRIMMER, M.A. Cantab., who was for 42 years secretary to the Royal College of Surgeons of England. He retired on a pension in 1901.

Other Practitioners.

Among the many other medical men who have passed away we may mention:—BERTRAM THOMAS READ, M.R.C.S. Eng., L.R.C.P. Lond., who died on Dec. 12th at Winchfield from appendicitis. Mr. READ began his professional life as surgeon on the Royal Mail line. DONALD J. A. MCLEOD, who died on Dec. 5th, 1903, at the age of 77 years, was for many years a well-known practitioner at Hawick. CHARLES FREDERICK MOORE, M.D. Glasg., F.R.C.S. Irel., who died on Christmas Day, 1903, was Fellow of the Irish Royal Academy of Medicine and an examiner of the Conjoint Board of the Royal College of Surgeons in Ireland and of the Apothecaries' Hall of Ireland. HENRY BOYD CARDEW, M.R.C.S. Eng., L.R.C.P. Lond., who died in January, 1904, at the early age of 37 years, was a well-known and popular practitioner in Cheltenham. JOHN ANDERSON, M.R.C.S. Eng., who died on Dec. 9th, 1903, was the oldest practitioner in the district of Buchan, being in his ninetieth year at the time of his death. GEORGE THIN, M.D. St. And., L.R.C.S. Edin., who died at Nice at the close of the year 1903, practised for eight years in Shanghai, where he gained an extensive knowledge of tropical disorders, especially of sprue. On his return to England he acquired a large practice, more especially as an adviser to banks, corporations, and steamship companies doing business with the East. DAVID THOMSON PLAYFAIR, M.D., L.R.C.P. & S. Edin., who died suddenly on Feb. 1st, was one of the best-known practitioners in Bromley, Kent. GEORGE COLVILLE MILLIGAN, M.B., C.M. Aberd., who died on Jan. 23rd at Davos, qualified in 1888 and owing to ill health practised alternately in Scotland and Switzerland. DUNCAN CAMPBELL LONGDEN, M.B., F.R.C.S., D.P.H. Edin., M.R.C.S. Eng., died at the early age of 37 years on Jan. 18th. He graduated as M.B. in 1887 and was appointed senior demonstrator of anatomy at Surgeons' Hall, Edinburgh. This post he had to resign on account of ill health in 1890 and he passed most of the remainder of his life as surgeon on board the British India Steamship Company's liners. In 1900 he was appointed medical officer of the Boer refuge camp at Barberton and in November, 1903, he received the Transport Service medal from the hands of the KING. HENRY ROBINSON, L.R.C.P. and S. Edin., who died in the month of February was for many years a well-known practitioner

in Chesterfield. GEORGE HADDOW, M.B., Ch.B. Edin., D.P.H. Cantab., who died during the same month at the early age of 29 years, had only been settled in practice for some 18 months. GEORGE NIVEN, M.B. Cantab., M.R.C.S. Eng., who died on Feb. 7th, was a member of a well-known Peterhead family and practised in Manchester, of which city his brother is the medical officer of health. CHARLES GODSON, F.R.C.S. Eng., L.S.A., who died during the month of February at the age of 84 years, was educated by apprenticeship and at St. George's Hospital. He was one of the best and most successful accoucheurs of the day. JOHN REUBEN BATHURST DOVE, who died on Jan. 27th in his 67th year, was educated at the London Hospital, worked through the cholera epidemic of 1866, and finally settled at Pinner where he practised for 34 years. GEORGE RIGDEN, M.R.C.S. Eng., of Canterbury, who died on March 21st, aged 89 years, was from 1837 to 1900 secretary and surgeon to the Canterbury Dispensary. As a practitioner he was best known as an accoucheur. Of RICHARD SISLEY, M.D. Lond., M.R.C.P. Lond., who died on May 7th, we have spoken so fully in the notice of his career which appeared in THE LANCET of May 14th that we need not here recapitulate his high qualities and the sense of personal loss to ourselves which his untimely death brought about. CHARLES DOUGLAS FERGUSSON PHILLIPS, M.D. Aberd., F.R.C.S. Edin., who died on Nov. 13th, aged 74 years, was a well-known practitioner in the West-end of London. In 1878 he commenced an action for damages received in a railway accident against the London and South-Western Railway Company and was eventually awarded £15,000. ALFRED JOHN FREEMAN, M.D. Aberd., M.R.C.S. Eng., who died on Nov. 27th at San Remo, was commonly known as "Freeman of San Remo," in which place he had practised for over 30 years. CHARLES WILLIAM CHALDECOTT, M.R.C.S. Eng., L.S.A., who died on Nov. 5th, was educated at St. Thomas's Hospital and was the son of a practitioner at Dorking. He took over his father's practice in 1851 and continued it with conspicuous success for 50 years when he retired. Other names which we must note are those of WALTER WINTER WALTER, M.R.C.S. Eng., L.S.A., of Stoke-sub-Hambden, who died on April 1st; DANIEL MOUNCEY ATKINSON, L.R.C.P. & S. Edin., L.F.P.S. Glasg., who died during the month of April; FRANCIS JOSEPH LANDER, M.R.C.S. Eng., L.R.C.P. Lond., who died on April 12th from a bicycle accident; JAMES FRANCIS TAPLIN, M.D., C.M. Glasg., who died on April 14th, aged 66 years; GEORGE CROKER, M.D., Glasg., F.R.C.S. Irel., who died on Sept. 22nd, aged 90 years; EDWARD WILLIAM ORTON, M.R.C.S. Eng., L.R.C.P. Edin., who died on Oct. 7th after a long illness; WILLIAM NAUGHTIN, M.R.C.S. Eng., who died on Sept. 6th; and JAMES WALLACE, M.D., F.F.P.S. Glasg., L.R.C.S. Edin., who died suddenly on Oct. 10th, aged 78 years.

Distinguished Foreign Medical Men.

Among eminent foreign medical men whose deaths have been noted in our columns we may again refer to A. A. LIEBBAULT, M.D. Strasburg, who died on Feb. 12th, and was the doyen of the Nancy School of Hypnotism. ANTONIO DE MARTINO of Naples and a member of the Italian Senate was physician-accoucheur to the House of Savoy. He died on Feb. 29th at the age of 84 years. DUCLAUX, who died in the month of May, was not a medical man but was director of the Paris Pasteur Institute and a chemist who worked indefatigably at microbiology. ETIENNE J. MAREY, who died on May 16th, was professor in the College de France and one of the first physiologists of the last century. The name of NIELS RYBERG FINSEN, who died on Sept. 24th, is known throughout the world for his researches upon the therapeutic effects of light. He carried on these researches under conditions of extreme difficulty as regards his bodily health, for during the last 20 years of his life his heart was seriously affected. UMBERTO FLORA, who died on Oct. 2nd, was professor of pathology at the Instituto di Studi Superiori at Florence. He worked mainly at typhoid fever and died from that disease contracted while in attendance upon a patient suffering from it.

And so we close the tale of those of our professional brethren who have finished their labours here, remembering the words of the poet:—

> "And then as, 'mid the dark a gleam
> Of yet another morning breaks,
> And like the hand which ends a dream,
> Death with the might of his sunbeam
> Touches the flesh and the soul awakes,
> Then ....."

Annotations.

"Ne quid nimis."

THE NEW DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE.

THE KING has been pleased to approve of the appointment of Surgeon-General Alfred H. Keogh, C.B., to the post of Director-General of the Army Medical Service. Lieutenant-Colonel (temporary Surgeon-General) Alfred H. Keogh, M.D., M.Ch. R.U.I., joined the army as surgeon in 1880, became lieutenant-colonel in 1890, and has had the temporary rank of surgeon-general since January, 1902, when he became deputy director-general. This appointment would seem to mark a new departure and assuming, as we think we may, that it has the approval of the advisory board and having regard to the constitution of that board, to emphasise a policy of promotion by selection on professional grounds rather than a rigid adherence to the more purely military claims of seniority. Our present issue being devoted nearly entirely to a review of the medical events of the expiring year we must defer comment but we may add that the new Director-General has distinguished himself as an organiser both in the late war in South Africa—where his services obtained for him the medal with clasp, mention in despatches, and the Companionship of the Bath—and at headquarters, working under his predecessor, Sir William Taylor.

THE JEWS AND INFANTILE MORTALITY.

IN a recent address at a meeting of the Ancoats Healthy Homes Society of Manchester Dr. John Milson Rhodes compared the sanitary efficiency of the present time and the neglect that prevailed 50 years ago. At that time the principal streets of Manchester were swept once a week and the "undedicated" streets and lanes were never swept at all. The general mortality from infectious disease was more than 1 in 4, now it is 1 in 12. Typhus fever was then prevalent. Last year there was not a case in the whole city. 50 years ago there were 18,000 cellar dwellings in the city, now there are scarcely any. At that time only half the houses were supplied with water and the supply was only for four hours a day in rainy weather and one hour per day in dry weather. There were no public baths in the city and no public park. There remained, however, urgent need for reform in the direction of sweeping away pestilent places still left in the poorer parts of Manchester. Though the general death-rate has fallen very considerably during the last five decades, the infantile mortality is "almost as high as it was 50 years ago," but as Dr. Rhodes said, "there was one part of Manchester where it was comparatively low,"—i.e., in the Jews' quarter, where the mothers "stop at home and look after their children and whose laws in relation to the vessels in

which they keep their food are very strict." He had found also that in Hungary the infantile mortality was lowest among the Jews. These remarks were followed a day or two after by an interesting article in the *Manchester Guardian* by "A Jewess." She speaks of it as a fact brought out by several investigations that Jewish children are superior to non-Jewish children in stamina and physique and would with Dr. Rhodes attribute it primarily to the fact that Jewish mothers do not go to the factory to work. It is considered a disgrace for a man to let "the mother of his children go to the factory, working above her strength and depriving the children even before birth and after it of that care which is their right." She is surprised, however, that Dr. Rhodes should consider that the Jewish mothers keep the vessels from which the infant is fed cleaner than their neighbours'. Her experience has not led her to look for great cleanliness among the poorer Jews, many of whom come from the ghettos of Russia and Poland. Most certainly the appearance of the lower class Jews to be seen in Strangeways and the neighbouring streets would indicate that cleanliness was not considered a virtue. But she says that they give their children good milk and she considers that the Jewish diet makes for health. All forms of pig's flesh, all shell-fish, and all tinned meats are excluded "because they have not been killed and examined in accordance with the law." All game, too, is forbidden. Beef, mutton, poultry, and most kinds of fish are allowed if fresh and free from disease, and care is taken that such meats only are offered in the shops where Jews purchase. There is also very little alcoholic excess. Few Jews are teetotalers but as a rule they only take wine, beer, or spirits on festive occasions and practically there is no excess. No doubt something may be learned from the aliens who are rapidly transferring the ghettos of Russia and Poland to certain quarters of our large towns.

COLLATERAL PARALYSIS IN CEREBRAL LESIONS.

IN the *Scottish Medical and Surgical Journal* for November Mr. J. H. Pringle has published a valuable paper on "collateral paralysis" in lesions of the brain. The term collateral is applied to rare cases of paralysis in which the cerebral lesion is apparently on the same side. The condition is of great importance to the operating surgeon. Mr. Pringle relates the following case. A man, aged 58 years, was taken to hospital in a comatose condition. He went to work as usual at 5 A.M. on that morning but after one and a half hours he returned home in a tramcar because he did not feel well. On arrival he had a dazed look and soon became unconscious. On admission respiration was slow and stertorous with puffing of the cheeks. The arteries were very atheromatous. The right limbs were very rigid, but the left were not. On being pinched he moved the left limbs but never the right. The right pupil was small and its reaction was doubtful. The left eyeball was shrunken from an old injury. Mr. Pringle diagnosed cerebral hæmorrhage on the left side. The patient never recovered consciousness and died on the following day. No history of any injury could be obtained. The necropsy showed a fissured fracture of the skull which commenced anterior to the right parietal eminence and ran downwards and forwards, dividing into two limbs of which one ended in the middle fossa at the sphenoidal fissure and the other in the orbital roof. In the brain the only lesion found was an extensive laceration of the right frontal and temporo-sphenoidal lobes with a large effusion of blood in the right middle and anterior fossæ which extended upwards over the right hemisphere. Examination of the medulla did not show any abnormality of decussation. Mr. Mansell Moullin has recorded the case of a stevedore, aged 43 years, who received a blow on the right side of the head. He continued working for three hours and then became comatose. He was admitted to the London Hospital with right hemiplegia. The coma became deeper on the eighth day and he was trephined on the left side without any lesion being found. He died on the following day. The necropsy showed a subarachnoid clot covering the right hemisphere and no other lesion.[1] Professor Ledderhose has published an important paper on collateral paralysis[2] of which he collected 42 cases. 25 were due to spontaneous hæmorrhage, six to abscess, eight to tumours, and three to recent traumatic hæmorrhage. In a case of injury of the head under his own care with complete right hemiplegia he trephined on the left side but found nothing abnormal. Death occurred 24 hours later and the necropsy showed a large subdural clot on the right side. In a case related by Dr. Lauenstein of Hamburg there was left hemiplegia after a fall. Trephining was performed on the right side with negative result. The patient died and the necropsy showed on the left side an extradural clot measuring eight by eleven by one and a half centimetres. The explanation of such cases is difficult. Morgagni suggested that they might be due to absence of the usual decussation of the pyramidal tracts and some support to this view has been given by Fleschig who showed that the number of fibres which decussate is very variable, but according to Sir William Gowers "there is strong reason to believe that where the paths do not decussate in the medulla they cross lower down in the spinal cord." In the discussion which followed the reading of the description of the only other case in which the hæmorrhage was extradural,[3] Cruveilhier suggested that blood effused on one side of the brain might cause so much pressure on the opposite hemisphere against the skull as to produce paralysis. But, as Mr. Pringle remarks, no doubt paralysis might be so produced but probably both hemispheres would suffer and the paralysis would be bilateral, not collateral. Professor Ledderhose refers to the experiments of Goltz on dogs, which show that, while all the muscles of the body are represented in each hemisphere, the paths to the muscles of the opposite side are easier than those to the muscles on the same side and suggests that in some persons the motor path on the same side may be easier than the one on the opposite side, so that a cerebral lesion would produce collateral paralysis. Whatever be the explanation the patient generally dies unless the effused blood is removed by operation. Mr. Pringle therefore thinks that if, on trephining the side indicated by the paralysis the surgeon finds no lesion to account for the hemiplegia, he should explore the opposite side of the brain.

WE regret to announce the death, which occurred on Dec. 23rd, of Dr. Francis Henry Blaxall, formerly a fleet-surgeon in the navy and for many years a medical inspector of the Local Government Board.

[1] THE LANCET, Nov. 18th, 1893, p. 1251.
[2] Archiv fur Klinische Chirurgie, vol. ii., p. 316.
[3] Bauchet: Bulletins de la Société Anatomique de Paris, 1852, p. 452.

THE GERMAN MEDICAL MISSION AT URFA IN ASIA MINOR.—Dr. Andreas Vischer, assistant in the surgical clinic of the University of Basle, will go out to Urfa as medical missionary in charge of the hospital there.

DONATIONS AND BEQUESTS. — Mr. Herbert William Allingham, F.R.C.S. Eng., by his will bequeathed £2000 or the residue of his estate, if less than that sum, to St. George's Hospital, to found a surgical scholarship to be named the "Herbert Allingham Surgical Scholarship," the sum to be invested separately, in permanent funds, and 10 guineas out of the income are to be paid to the examiner for the scholarship annually and the residue of the income in such way as the governors of the hospital may direct.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 30, 1826.

COLLEGE OF PHYSICIANS.[1]

To the Editor of THE LANCET.

SIR,—I am exceedingly amused with the humorous squibs and crackers lately fired off in your and other journals; I augur the happiest consequences from them, as they appear to have already had the effect of rousing the imperial faculty to a very high pitch of excitement. All ranks, and every order, participate in the enthusiasm. If the zeal and ability recently displayed continue but for a short time longer, the best results will be attained, both for the members of the medical profession and for their patients. The musty worm-eaten fabrics of monkish contrivance will either be overthrown, or repaired, enlarged, and embellished with materials suitable to their professed object, and in accordance with the intelligence of the times in which we live. To you, who have laboured so hard, and contributed so much towards effecting these desirable changes, by incessantly combating inveterate professional abuses, the medical world acknowledges its obligations. Go on, Sir, in your career of usefulness, unmindful of the puling, calculating politics of a Cook, or his ridiculous vagaries on "the state of medical feeling." They may, pointless as they are, raise him, as similar inanities formerly did a chevalier, *ad summos chirurgiæ honores*. Well, let them be his reward, unless the enlightened members order things better than they did on the occasion referred to. The times, Sir, are more auspicious than they ever were before. It should not be forgotten, that "there is a tide in the affairs of men, which, taken at the turn, leads on to fortune."

The more immediate object of this hasty sketch is to call your attention to the bitter but merited taunt against the Licentiates, in the concluding part of a Letter published in your 165th LANCET, signed "A Friend to the late Censors," and to a communication signed "Socius," in the last Yellow Journal. . . . . .

1st. We are told, that the College of Physicians *permits* the graduate of every University in the world to practise, in all respects, as freely as the fellows, after an examination *similar* to that which is submitted to by the English graduates." Of course "Socius" is better acquainted than myself with College tactics. Had the information come through a less authentic channel, I should have denied it *in toto*. I have always understood that, before the applicant (I cannot compliment him with the title of candidate) is suffered to offer himself for the humiliating boon, he is obliged to sign his self-condemnation in something like the following words: "That he is unfit to undertake the treatment of *all* descriptions of patients, and is *therefore not qualified* to be a *fellow;* but thinking that he might be useful in *some trifling ailments*, he humbly solicits *a license* for that purpose." This degrading preliminary having been duly signed, authenticated, and registered, he is admitted to examination. Here, again, he is made to feel his inferiority. While the candidates for the fellowship are required to translate a few lines in Aretæus, or some other Greek book equally out of date, the licentiate, to keep up an absurd distinction, is not permitted to show his qualifications in that language. Such is, I am told, the whole difference (and a difference it is, notwithstanding the dissimulation of Socius) in the examination of fellows and licentiates. Upon this pretended, though indefensible superiority, rests the only colourable pretence for establishing two grades of practising physicians, in opposition to the laws of the land, and the proceedings of the College, during the two first centuries after its formation. If we were to admit the superiority of the fellows in classical lore, would it constitute a ground for pre-eminence in medical skill? I am warranted in assuming, that, as a body, the licentiates are equally qualified in the sciences, and in general literature, with the fellows, and infinitely their superiors in what is the most important to a physician, *medical knowledge*. At any rate, let a fair trial be exacted before judgment is pronounced.

2dly. "There is, I assure you, no *unkind feelings* in the fellows towards their brethren of the Scottish or Foreign Universities."—Here again we have, unless I am much mistaken, an assertion in direct opposition to the fact. No "kind feeling" is wanted; but, if they act honestly, they will immediately restore the College to its original purity, by rescinding their illegal, tyrannical, and excluding by-laws. Under proper regulations, the mode of admitting members would be brought to what it was from the institution of the College in the reign of King Henry VIII. to the middle of the last century. In this, the golden era of the College, flourished the immortal Harvey. It is not perhaps generally known, that notwithstanding his being Physician to the King, to St. Bartholomew's Hospital, and a distinguished fellow, he practised *both surgery and midwifery*. Such was the prevailing custom with physicians till after the death of King Charles the Second. This monarch, we are informed by Hume, was bled in his last illness by Dr. King, a skilful surgeon as well as an excellent physician.

In 1752 the Sons of Isis and of Cam acquired the ascendancy, and filled up the measure of their tyranny and injustice. Until this memorable epoch, all universities remained upon an equal footing as to college honours. From this period, everything valuable and respectable was awarded to the English Doctor, and a mere license granted to all others, which they were suffered to retain only while they behaved submissively to their task-masters. Had there really been a foundation in law, in equity, or in professional superiority for the distinction, the hardship would be the less intolerable; but, knowing as we do, that licentiates are equal in general acquirements, and far superior in medical science, the humiliation is insufferably grievous.—The "kind feeling of the fellows towards their Scottish brethren" will be fully understood when we take into account that this memorable by-law was directed against the rising reputation of the University of Edinburgh. This celebrated school of physic, founded in 1720, immediately succeeded to extraordinary pre-eminence. Its graduates crossed the Tweed in immense numbers, and acquired so much distinction in the South, that the English physicians were suddenly alarmed for their golden drops. To oppose the new race in open competition was impossible; stratagem became necessary. Hence started that damning by-law of 1752, which the fellows have never ventured to cancel, and which has justly excited an hostile feeling, founded as it is in a deep sense of oppression and injustice. Should "Socius" presume to deny any part of the above statement, he shall hear again from me on the subject.

The kingdom of Scotland had been some time united to England, and therefore, when it was most desirable to remove all the causes of jealousy and dissatisfaction, the London College widened the breach and increased the prejudices of their "Scottish brethren," in violation of the law of the land, the treaty of union, and their duty as good subjects. Moreover, since the graduates of Trinity College, Dublin, are freely admitted into the fellowship, is it not monstrous to exclude those of Edinburgh, the first medical University in Christendom, from an equal participation in college affairs?

[1] Excerpts from a letter signed "An Enemy to Injustice."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7509 births and 5674 deaths were registered during the week ending Dec. 24th. The annual rate of mortality in these towns, which had been 21·6, 18·5, and 19·2 per 1000 in the three preceding weeks, rose again last week to 19·4 per 1000. In London the death-rate was 17·6 per 1000, while it averaged 20·1 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 10·2 in Willesden, 10·5 in Bournemouth, 11·3 in Leyton, 11·4 in Leicester, 11·7 in Aston Manor, 12·0 in West Hartlepool, 12·2 in Walthamstow, and 12·5 in Rotherham; while the highest rates were 25·0 in Bury, 25·3 in South Shields, 25·5 in Newcastle-upon-Tyne, 25·6 in Rhondda, 26·5 in Manchester, 27·0 in Stockton-on-Tees, 28·5 in Tynemouth, 29·1 in Middlesbrough, 31·9 in Huddersfield, and 32·6 in Hanley. The 5674 deaths in these towns last week included 399 which were referred to the principal infectious diseases, against 482, 438, and 421 in the three preceding weeks; of these 399 deaths, 134 resulted from measles, 82 from whooping-cough, 72 from diphtheria, 40 from

diarrhœa, 35 from scarlet fever, 35 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was registered last week in Hornsey, Bournemouth, Southampton, Reading, Ipswich, Great Yarmouth, King's Norton, Smethwick, Aston Manor, Wallasey, Rochdale, Burnley, Newport (Mon.), or Swansea; while they caused the highest death-rates in Devonport, Hanley, Grimsby, St. Helens, Wigan, Halifax, Stockton-on-Tees, Tynemouth, and Rhondda. The greatest proportional mortality from measles occurred in Devonport, Grimsby, Stockport, Liverpool, St. Helens, Wigan, Stockton-on-Tees, and Merthyr Tydfil; from scarlet fever in Hanley and York; from diphtheria in East Ham, Hanley, and Wigan; from whooping-cough in Norwich, Preston, Halifax, Tynemouth, and Rhondda; and from "fever" in Grimsby. One fatal case of small-pox was registered in Gateshead, but none in any other of the large towns. The number of small-pox cases under treatment in the Metropolitan Asylums hospitals, which had been three, four, and six on the three preceding Saturdays, had further risen to 14 on Saturday, Dec. 24th; nine new cases were admitted during the week, against two, one, and two in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2393, against 2625, 2490, and 240[illegible] [illegible] 242 new cases were [illegible] 263, and 242 in the [illegible] London referred to [illegible] system, which had been 565, 448, and 487 in the three preceding weeks, declined last week to 416, but were 145 above the number in the corresponding period of last year. The causes of 73, or 1·3 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Salford, Bradford, Leeds, Newcastle-upon-Tyne, and in 41 other smaller towns; the largest proportions of uncertified deaths were registered in Northampton, Liverpool, Bootle, Warrington, Bury, Manchester, Sheffield, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21·2, 19·7, and 22 6 per 1000 in the three preceding weeks, declined again to 21·2 per 1000 during the week ending Dec. 24th, but was 0·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·6 in Leith and 15·6 in Paisley, to 23·1 in Perth, and 23·7 in Glasgow. The 700 deaths in these towns last week included 31 which were referred to whooping-cough, 25 to diarrhœa, 19 to measles, eight to "fever," five to diphtheria, and two to scarlet fever. In all, 90 deaths resulted from these principal infectious diseases last week, against 71, 68, and 80 in the three preceding weeks. These 90 deaths were equal to an annual rate of 2·8 per 1000, which was 1·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 34, 38, and 32 in the three preceding weeks, further declined to 31 last week, and included 24 in Glasgow and two in Edinburgh. The deaths from diarrhœa, which had been ten, 15, and 16 in the three preceding weeks, further rose last week to 25, of which 13 occurred in Glasgow, four in Dundee, three in Aberdeen, two in Edinburgh, and two in Leith. The fatal cases of measles, which had been ten and 17 in the two preceding weeks, further increased to 19 last week, and included nine in Aberdeen, seven in Glasgow, and two in Leith. The deaths from "fever," which had been four, one, and six in the three preceding weeks, rose last week to eight, and were all registered in Glasgow. The fatal cases of diphtheria, which had been three and seven in the two preceding weeks, declined again to five last week, and included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 190, 204, and 206 in the three preceding weeks, declined again to 174 last week, and were slightly below the number in the corresponding period of last year. The causes of 26, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·0, 25·2, and 25·3 per 1000 in the three preceding weeks, declined to 24·5 per 1000 during the week ending Dec. 24th. During the past four weeks the death-rate has averaged 25·5 per 1000, the rates during the same period being 19·1 in London and 16·5 in Edinburgh. The 178 deaths of persons belonging to Dublin registered during the week under notice showed a decline of six from the number in the preceding week, and included 12 which were referred to the principal infectious diseases, against 20, 14, and ten in the three preceding weeks; of these, ten resulted from measles, one from "fever," and one from diarrhœa, but not any from small-pox, scarlet fever, diphtheria, or whooping-cough. These 12 deaths were equal to an annual rate of 1·7 per 1000, the death-rates last week from the principal infectious diseases being 0·9 in London and 1·1 in Edinburgh. The fatal cases of measles, which had been 12, ten, and six in the three preceding weeks, rose again last week to ten. The 178 deaths in Dublin last week included 38 among children under one year of age and 54 of persons aged 60 years and upwards; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons were in excess. Eight inquest cases and six deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of nine, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE.

Surgeon-General Alfred H. Keogh, C.B., M.D., M.Ch. R.U.I., has been appointed Director-General of the Army Medical Service.

ROYAL ARMY MEDICAL CORPS.

Lieutenant F. M G Tulloch is seconded for service under the Foreign Office (dated Dec. 1st, 1904).

Colonel (temporary Surgeon-General) William Flack Stevenson, C.B., Professor of Clinical and Military Surgery, Royal Army Medical College, to be an Honorary Surgeon to the King, vice Surgeon-General J. Jameson, C.B., retired pay, deceased (dated Sept. 14th, 1904).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): The Highland: Surgeon-Lieutenant C. G. Mackay resigns his commission with permission to retain his rank and to wear the prescribed uniform (dated Dec. 24th, 1904). 1st Lanarkshire: Surgeon-Lieutenant R. W. Forrest to be Surgeon-Captain (dated Dec. 24th, 1904).

Royal Engineers (Volunteers): 1st Aberdeenshire: Surgeon-Major J. J. Y. Dalgarno resigns his commission with permission to retain his rank and to wear the prescribed uniform (dated Dec. 24th, 1904). 1st Cheshire: Harry George Frederick Dawson to be Surgeon-Lieutenant (dated Dec. 24th, 1904). 1st Lancashire: Surgeon-Captain G. A. Hawkins-Ambler resigns his commission (dated Dec. 24th, 1904).

Rifle: 2nd Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Lieutenant J. Marshall to be Surgeon-Captain (dated Dec. 24th, 1904). 2nd Volunteer Battalion the Welsh Regiment: The undermentioned Surgeon-Lieutenants resign their commissions:—W. F. Brook (dated Dec. 24th, 1904) and T. M. J. Powell (dated Dec. 24th, 1904). 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders): Captain G. W. Miller resigns his commiss[illegible] Dec. 24th, 1[illegible] Regiment: [illegible] are granted [illegible] (dated Dec. 24th, 1904) and [illegible] (dated Dec. [illegible], 1904). 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment): Ambrose Henry Palmer to be Surgeon-Lieutenant (dated Dec. 24th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Woolwich Companies: Lieutenant-Colonel F. L. Stephenson is granted the honorary rank of Colonel (dated Dec. 24th, 1904).

THE STATUS OF HOSPITAL SHIPS.

A Reuter's telegram to the *Times*, dated the Hague,

Dec. 22nd, states that the convention which has been drawn up by the conference on the status of hospital ships was signed to-day by the delegates of the Powers in the presence of the Dutch Minister for Foreign Affairs, who delivered a closing address. The delegates were subsequently received in audience by the Queen and the Queen-Mother. The convention exempts hospital ships from port dues and other charges in time of peace.

THE WAR IN THE FAR EAST.

Sister of Mercy V. N. Karieva has just returned to Moscow from the front and recounts her experiences after the battle of Mukden. She speaks of 11 trains of from 30 to 40 wagons each which were filled with wounded and sick, who, to add to their sufferings, could only have a very limited share of medical assistance allotted to them. The ears of the sisters were frequently struck by the words "Help, sisters, help!" that came from the wagons and they, as fast as they could get free, ran from one wagon to another. Many of the wounded were covered with filth, their linen being matted with blood, and maggots and lice lay in colonies over them. Many of them begged to be removed from their neighbours, the stench from whose wounds polluted the atmosphere beyond bearing. The sick were quite neglected, owing to want of time, although many suffered severely in various ways. Ultimately Sister Karieva fell ill with typhus fever, when her patients who could in their turn show their gratitude rendered her such services as they were able to. She says that the hospital journals record 80,000 wounded since the beginning of the war.

Correspondence.

"Audi alteram partem."

OPERATIVE TREATMENT OF RESULTS OF CONSTIPATION.

To the Editors of THE LANCET.

SIRS,—Before finally accepting or rejecting his momentous conclusions as to the frequency and dangers of chronic constipation and the necessity for its treatment by laparotomy and intestinal anastomosis[1] many of us, I feel sure, would be glad if Mr. W. Arbuthnot Lane would place before your readers an account of the number and kind of post-mortem and ante-mortem (operative and otherwise) observations upon which his description of the changes taking place in the intestine and its peritoneal covering is founded. I take it that Mr. Lane is dealing only with habitual constipation or "sluggishness of the bowels" in an extreme degree and not with intestinal obstruction or occlusion due to definite disease of the intestinal wall, because whilst all will agree that operative treatment is the only curative treatment for the latter few will be able to recall more than very occasional examples of the former in which ordinary medicinal treatment was not in every way sufficient to overcome it, whilst cases in which it alone gave rise to symptoms which could in any way be regarded as dangerous or even disabling for the ordinary duties of life must, I think, be of the greatest rarity. Personally I am unable to recall a single example of chronic constipation not due to localised mechanical obstruction of the bowel in which any symptoms, either local or general, were produced which could fairly be described as serious, and looking back over 11 years of post-mortem work in a large general hospital I cannot recall one case where the changes described by Mr. Lane were seen to result from obstinate constipation alone.

The habitual overloading of the bowel of which Mr. Lane speaks could very rarely, if ever, cause death, but many fatal diseases, such as phthisis, cardiac disease, renal disease, &c., are frequently associated with prolonged stagnation of the intestinal contents, but such cases present no changes in the peritoneum which are not readily and fully explained by the processes proper to the primary disease, such as localised tuberculous peritonitis, ascites, long-standing venous stasis, &c. The adhesions which Mr. Lane describes could only be brought about by a chronic inflammatory process. Mr. Lane does not say that he regards them as of inflammatory origin, neither does he, so far as I can follow him, explain why if they are due to habitual overloading of the bowel they should occur only on the outer side of the bowel, as shown in his diagrams, and not on the inner side, or, indeed, over the whole surface of the bowel. I venture seriously to doubt whether simple stretching of the bowel by its contents can give rise to chronic inflammatory changes in the peritoneum without first affecting the mucous and muscular coats. Pathologists are, I believe, most reluctant to admit the occurrence of abiding and progressive inflammatory processes from purely mechanical as distinguished from infective causes, such as Mr. Lane suggests.

Mr. Lane attributes a large number of very diverse symptoms to the local and distant effects of habitual overloading of the large bowel, some of which are, to say the least, vague and unimportant, such as "loss of control of the temper" and "a peculiar and objectionable smell most marked in the flexures of the body," whilst not one of them appeals to the ordinary reader as being a matter of life and death. Mr. Lane says "the harm done, directly or indirectly, by constipation is infinitely greater and more far-reaching than that ascribed to alcohol." Is it seriously pretended that conditions at all comparable with alcoholic cirrhosis, peripheral multiple neuritis, delirium tremens, &c., not to mention social, moral, and financial ruin, are ever seen to result from habitual constipation? If it is, surely our social reformers should be urged to turn their attention from the "drink traffic" to the large intestine, and stations for the performance of "ileo-sigmoidostomy" ("free" and "while you wait") should be established throughout the land.

But better criticism than any I can make is to be found in an address, Round about Constipation, by Dr. J. F. Goodhart,[2] and, if I may be permitted to do so, I will quote from it a few remarks which directly traverse many of Mr. Lane's contentions and at the same time recount nothing more than the everyday experience of most of us. Dr. Goodhart says: (1) "A mere adhesion, such as seems often to be accepted as a sufficient explanation of obstruction of the pylorus or intestine, I have little belief in, because you rarely, I think, find such localised adhesions in the post-mortem room where there has been any evidence of their presence during the life of the patient." (2) "There are many people who live through their adult life in the belief that if the bowels do not act for two or three days they will get a block—that is, there will come obstruction of the bowels. So many of us act, too, as if we believe it, that we encourage the same doctrine. But it is not a fact. I can say positively that in 35 years of work I have only seen one case of this kind and in consequence I made a wrong diagnosis." (3) "A mere intestinal accumulation never produces obstruction." (4) "I have often been struck with the fact that of all of those who suffer from constipation how few there are who give any sign of retention." Lastly, speaking of intestinal auto-intoxication, to which Mr. Lane attributes many of the symptoms he enumerates, Dr. Goodhart says: "I think the time has come to make a protest when we are becoming over-ridden by the minuteness and ingenuity with which this doctrine is now elaborated. I hear of nothing now but auto-infection and auto-intoxication ..... and really one would almost think from the contumely that is heaped upon our uncomely colon, that the evil that it is supposed to do us, and the bits, and large bits too, of which it is now ofttimes bereft by the surgeon, that happy would be the man who could ..... live without it." It is interesting and instructive thus to place side by side the teaching of two distinguished members of a medical school which stands pre-eminent for its devotion to the methods of observation and experiment as distinguished from those of speculation and hypothesis. The modern advances of abdominal surgery have conferred many benefits upon the community and upon the surgeon, but they have brought with them one stumbling block in the path of the advancement of real scientific surgery in that they have led the surgeon in too many instances to exclude himself from the post-mortem room and the pathological laboratory.

I am, Sirs, yours faithfully,

Leeds, Dec. 18th, 1904. ALFRED G. BARRS.

THE ASYLUM MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—In the section of the annual report of the Commissioners in Lunacy which deals with the inadvisable system of having asylums of excessive size the Commissioners incidentally allude to the decidedly unfavourable prospects

[1] THE LANCET, Dec. 17th, 1904, p. 1690.

[2] THE LANCET, Nov. 8th, 1902, p. 1241.

of the assistant medical officers. They also assume that, on the whole, there is such a lack of experience among them that the patients are not so well cared for as they might be. It therefore seems to me to be opportune to call attention to some of the unfair conditions under which the assistant medical officers are expected to perform their duties. The authorities who have the control of the asylums do not, I think, realise that the present standard for qualification for medical men neces-itates a high training—higher, indeed, than that required for any other profession; that just as they are qualified to practise midwifery they are also qualified to treat mental disease; and that a few years' experience in a large asylum makes them specialists and in consequence deserving of consideration. The very nature of the work, the responsibility involved, the close association with the insane, the element of danger, require that not only should all objectionable conditions be removed but that more attractiveness be given to this branch of the public service.

In the first place, I may mention the great uncertainty as to promotion. Almost of equal importance is the enforced celibacy. I believe that lunacy is the only branch of the public service in which such a state of affairs exists. Granted that there are one or two asylums in which the senior assistant or deputy superintendent is permitted to marry, permission is quite dependent on the peculiarities of the principal medical officer or superintendent or of the committee. Instead of being permissive it certainly should be optional after some years' service and to make this possible the salaries of the second medical officers should bear a just relationship to that of the superintendent. Here I may mention a fact of which the authorities lose sight—namely, that a man who has spent some years in the treatment of mental disease has become a specialist and is unfitted to enter into general practice. Further, with regard to salaries it suffices to mention that a medical superintendent will draw £1000 in many instances, many draw more, while the next medical officer will draw £200 or £250 as a maximum, yet he will be acting superintendent for about one-sixth or more of his time and do his own work as well.

Again, in consequence of the association with lunatics a considerable amount of leave is a necessity. In the majority of asylums a bare month is allowed; in fact, in many only 28 days, but leave for single nights or week-ends is dependent altogether on the caprice of the medical superintendent. I am glad to say that there are many superintendents in the country who act reasonably and justly with regard to this but the absence of any fixed leave of the kind gives the superintendent the power of refusing it, which some, I am sorry to say, exercise and in consequence there are cases to my knowledge in which the medical officers put in 11 months in the year without being able to spend one night away from the institution. This is manifestly unreasonable, considering that there are perhaps six medical officers constantly on duty. There are other serious evils to be put right in the asylum service. The Commissioners can do much to reform. May I suggest that when visiting the different asylums in the ensuing year the Commissioners should inquire into the conditions under which the assistant medical officers do their work and make recommendations where needed in their usual reports?

I am, Sirs, yours faithfully,
M.B.

Dec. 19th, 1904.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—Insanity caused by the Taking of Indian Hemp.—The Slow Progress of Sanitary Improvements in India.

THE advance in the total plague mortality throughout India reported during the past weeks has had a slight set back, as the deaths recorded for the week ending Nov. 12th are some 800 below the figures of the preceding week. The details are: Bombay city, 79 deaths; Bombay Presidency, 7603 (it is in this province that the decline has chiefly occurred); Karachi, 13; Madras Presidency, 398; Calcutta, 6; Bengal Presidency, 336; Punjab, 1357; United Provinces, 2476; Central Provinces, 450; Mysore State, 657; Hyderabad, 125; Central India, 364; Rajputana, 500; and Kashmir, 33; or a total of 15,197, against 18,360 during the corresponding period of last year. It will be noted that the same areas as of last year record recrudescences of plague and as with each succeeding annual recurrence fresh places become attacked the total mortality tends to rise. Last year unhappily furnished a record for a week's mortality and the present development seems not only as extensive but as virulent. With all this the policy of the Government seems to be to do little or nothing. The mild measures, if they can be called measures at all, of the Government of the United Provinces have been reissued in a still milder or permissive form by the Government of Bengal. The plague returns for the week ending Nov. 26th show again a rise after the small set back of the two previous weeks. For the whole of India there were 14,528 deaths, as against 14,115 for the preceding week and 17,617 for the corresponding week of last year. The increase is principally in the United Provinces and the Punjab. The details are: Bombay Presidency, 6312; the United Provinces, 3006; the Punjab, 2092; Bombay city, 75; Karachi, 12; the Madras Presidency, 448; Calcutta, 8; Bengal, 413; Central Provinces, 598; the Mysore State, 589; the Hyderabad State, 520; Central India, 208; Rajputana, 224; and Kashmir, 23. No mention is made of Poona where the disease is raging severely.

The amount of insanity in India is comparatively small so far as can be judged by the census figures and asylum returns. The common practice of taking a preparation of Indian hemp known as bhang or charas is recognised by the people themselves as productive of more or less permanent mental derangement. Major G. F. W. Ewens, I.M.S., has made a careful investigation into the subject and has published his results in the *Indian Medical Gazette*. It is stated that no less than 33 per cent. of patients admitted into the Lahore Asylum are believed to have been habitual hemp-drug takers. The characteristic symptoms of this form of insanity are described as violent mania of sudden onset, with great exaltation and sense of well- and a tendency to commit ty acts of reckless violence. face, with bloodshot eyes and increased heat of the scalp and a peculiar form of conjunctivitis. A total loss of memory for the impulsive and violent acts committed is to be noted. The treatment, consisting of stoppage of all hemp drugs, is followed by recovery in a relatively large number of cases.

The slow progress of sanitary improvements in India is well illustrated by the story of the waterworks of Amritsar. In 1881 a severe epidemic occurred in this city which then contained about 144,000 inhabitants. The official report clearly showed that the deaths were due to defective drainage and a sewage-poisoned water-supply. Something was done to improve the drainage but the wells in the city were left alone, notwithstanding that 14,000 people had died during the five months of the outbreak. During succeeding years various schemes were suggested—some proposing that fresh wells should be constructed, others that a supply of water should be taken from the adjacent canal. In 1885 a loan was refused; "until steps were taken to provide for the efficient drainage and conservancy of the town, to relieve the overcrowding in certain localities, and to carry out certain other minor improvements it would be premature to attempt to provide for an elaborate water-supply." In 1898 practically the same schemes were put forward again, nothing having been done during the interval of 13 years. The Government approved a plan for providing 80 wells but the people of Amritsar and their advisers objected. The question dragged on until 1902, when all the authorities agreed upon a new site for the wells. The Government lent the money and the project has now been completed. After all, the supply is limited—only eight gallons per head for the population of [illegible] cantonment. [illegible] be procured.

Dec. 10th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday Fund.

A MEETING for the distribution of the sum raised by this means for charitable purposes has recently been held when cheques for the sums allotted to the various institutions were

handed over to the respective honorary treasurers by the Lord Mayor who presided. This was the first year in which the new method was tried of giving all institutions a share in the proceeds of the fund instead of the previous triennial arrangement by which the General Hospital, the Queen's Hospital, and the amalgamated charities each took a year in turn. The Lord Mayor said that last year was one of bad trade and depression and although it might have been regrettable yet one would not have been surprised if the collection had shown a little shrinkage. Instead of that it appeared to have been well maintained; in fact, £5501 was the highest amount that had been reached, with the exception of one year, since 1878, and he thought that that result, having regard to the circumstances, could be considered highly satisfactory. Of course, if they looked at the rapid growth of the Saturday collection the figures which appeared from time to time in regard to the Sunday collection did seem to be in rather a stationary condition. He thought there were many reasons which might be given to show that though the Sunday collection did not appear to grow it was doing very excellent work. It was continually affecting the subscription list of the various institutions. The Rev. G. J. Emanuel deprecated the comparison which was frequently made between the torpor of the Sunday collection and the remarkable activity of Hospital Saturday. The two did not go together. For the Sunday collection they had one day in the year, while the Saturday collection went on week by week all through the year. If they could get the clergy and ministers of religion to make a weekly collection on the smallest scale they pleased he was sure the Sunday collection would soon reach something like the dimensions of that for Hospital Saturday. A better comparison was to compare the Hospital Sunday results with those achieved elsewhere. He had studied the subject a little and was pleased to say that they in Birmingham were head and shoulders above other provincial cities having regard to their needs. He saw that in the metropolis they were about to give away £80,000. Now if they considered the enormous wealth of the metropolis he contended that comparing their £5500 with London's £80,000 they had nothing at all to be ashamed of.

The Floodgate Street Area.

This portion of the city, containing about 114 acres, of which, however, only a small portion relatively is occupied by dwelling-houses, has for some time attracted a most unenviable notoriety on account of the way in which its inhabitants live and has recently been made the subject of a special report of a most interesting character by the medical officer of health. After giving a large number of statistics he remarks that the figures are typical of "poverty stricken, insanitary, and vicious population." The typhoid fever mortality is unexpectedly low but the medical officer explains this by saying that "people living in filth and dirt continuously become more or less insusceptible to the form of filth which breeds typhoid infection." He states that a fair proportion of the houses are of low rental, but when the wages of the occupants are inquired into so much poverty exists that it is somewhat remarkable that more effort to economise by taking two families into one house is not made than is actually found. Incidentally the inquiry has demonstrated the fact that many of the rentals in that district had increased since the inquiry was made by the staff of the health department in 1898 and that increase had largely occurred amongst the low-rented houses. 1236 houses are of the back-to-back type and the number of available through cottage houses is therefore very small. Dealing with the houses built on the courtyard system and referring to the sanitary condition of these premises Dr. J. Robertson says: "There is so much trouble entailed in getting water into the houses and afterwards disposing of it as slops that I am rather surprised to find so many people keeping their houses and themselves clean." The typical courtyard house, which was the prevailing type in the centre of the city, was generally damp. A house with damp walls and floors was the cause of much ill-health among a city population. The air space attached to courtyard houses was insufficient and the general gloom and dirt made life far from what it ought to be. In many of the courtyards pan-closets still existed. The housing conditions were generally bad in a considerable proportion of the houses but those conditions were in no way worse than in many other areas in the city and it did not appear that the evils which existed on the area "are alone due to the bad housing conditions. The condition of poverty in which the people of this area live has impressed me more than any other feature." It was found that a very large number of persons were, from their own statement, in poverty. Having set out some interesting statistics as to the total earnings of households per week, the medical officer says: "It is, I think, impossible for a man living in the centre of the city and employed as a labourer at the standard rate of wages, to keep a wife and family of three children without being in poverty; this notwithstanding the fact that he does not spend anything on drink or tobacco or on travelling to and from his work. His only chance for getting enough for rent, clothing, food, and fuel lies in the family earnings being increased by his wife's earnings or by the earnings of a child or by taking in lodgers. The necessity therefore exists among this large class for a wife to leave her young children to go to work and for the children being put to work at the earliest possible opportunity. If anything be spent on drink actual poverty is at once evident. In the area we found a large number of skilled artisans who admitted receiving good wages and who were apparently living in conditions of poverty from drink, gambling, or other unnecessary expenditure." Having alluded to the general sanitary and recreative conditions of the area, the report treats of drink as one of the causes of ill-health, on which point the medical officer says: "In addition, however, to all the contributory causes already mentioned it is difficult to say whether drink, combined with ignorance and carelessness, does not play as important a part—or even a more important part—than all the conditions of bad housing, smoky atmosphere, and poverty. One cannot but be struck, in going over such an area in the evening, with the number of public-houses and with the extent to which they are used as clubs. A large number of men and women in the area soak themselves with drink every day, thereby ruining their constitutions, bringing on poverty, and indirectly causing most unhealthy conditions. Bearing in mind such conditions resulting from the excessive use of drink, the drink question has a public-health aspect of the greatest importance and I have therefore referred to it, although it does not come within the questions for consideration by the health committee." Ignorance and carelessness also, no doubt, contribute much to the misery in the area and it would be unjust to say that the property owner alone is at fault with regard to the condition of the houses. The medical officer feels strongly that the municipality must in the immediate future take steps to reduce the crowding of courtyard houses in the centre of the city and at the same time to direct the development of the city outwards, so as to prevent a recurrence of the conditions already existing. Therefore he believes that the first step which requires to be taken in Birmingham is to make it possible for the working classes to spread themselves over a much wider area than they can do at present. Dr. Robertson holds that self-contained houses with a separate water-supply, &c., should be allowed, but as it is impracticable to substitute such houses for the 30,000 or 40,000 courtyard houses now existing, the medical officer suggests that the evil should be minimised as much as possible by an extension of the work of the housing committee. It is recommended that (1) the courtyard should be opened out to the street so as to admit air and light and to allow of a certain amount of supervision from the street; (2) the houses should be made dry and capable of being kept clean; (3) all the filth which accumulates under floors, skirting-boards, &c., should be removed and destroyed; and (4) the filthy and degrading pan system should be done away with and ashbins provided for dry refuse. In any scheme which has for its object the spreading of the artisan population over a wider area, it is essential that attention should be paid to the proper provision of (1) open spaces for recreation; and (2) houses with rentals within the means of the people. For this purpose it may even be necessary in the case of low-rented houses where sufficient guarantee as to rent, &c., is forthcoming that the building by-laws should be relaxed but the medical officer hopes that this may not be necessary. On the Floodgate-street area and in the wards the damage to health from constant soaking with beer assumes a public-health aspect, and although the subject cannot be dealt with directly by the sanitary authority the medical officer suggests that a representation should be made to the proper authority urging that the facilities for soaking in public-houses should be limited. If they could by any means remove this abuse of drink a great step in the direction of cleanliness and better health would be taken.

Dec. 27th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Town's Memorial to the late Sir William Mitchell Banks.

A MEETING of the general committee of the Sir William Mitchell Banks Memorial was held at the town-hall on Dec. 23rd to consider a recommendation from the executive committee that the memorial should take the form of a lectureship at the University of Liverpool and a new out-patient department at the Royal Infirmary. The Lord Mayor presided and moved the adoption of the recommendation, which was seconded by Dr. William Carter and supported by Mr. Edward Kewley, the chairman of the Royal Infirmary, who said that a sum of £1500 would provide a lectureship on some advanced subject in which the late Sir William Mitchell Banks was interested, and it was hoped that a further sum would be provided to meet the requirements of an out-patient department at the Royal Infirmary, for which the need was urgent. The latter proposal was so large that the committee of the Royal Infirmary had hesitated to bring it before the public. No more suitable memorial, as Mr. Kewley stated, could be suggested, and though the cost would be heavy subscribers would have the satisfaction of knowing that they were not only perpetuating the memory of an eminent

supported the idea of a lectureship at the University. The subscriptions already promised towards the joint object amounted to £3550, which included two contributions of £1000 each, one of £500, one of £250, and other donations amounting to £800.

Liverpool Hospital for Consumption: Opening of the New Building.

The new hospital for consumption and diseases of the chest which has been erected in Mount Pleasant on the site of the old building was formally opened on Dec. 22nd by the Countess of Lathom in the presence of a large gathering of ladies and gentlemen interested in the object of the institution. The Lord Mayor presided, and in addition to the Earl and Countess of Lathom there were present the Bishop of Liverpool, the Rector of Liverpool, the Rev. Dr. John Watson (Ian Maclaren), and others. The Countess of Lathom, in formally declaring the hospital open, said that it gave her great pleasure and pride to be present. She hoped that all present would do their utmost to further the interests of this hospital, which was doing such a good work. The Bishop of Liverpool proposed a vote of thanks to the Countess of Lathom for her gracious act in opening the hospital and on behalf of the poor of the city he thanked the committee of the hospital and kindred workers for what they had done to combat the ravages of consumption. The vote was seconded by Mr. H. L. Smyth, the chairman of the hospital. Lord Lathom, in replying on behalf of the Countess, observed that when the history of the last half century was looked back upon the most striking feature would be the growth of human kindness. £5000 were still required to free the hospital from debt, of which £1500 had already been promised. The Lord Mayor, in reply to the vote of thanks accorded to him for presiding on the occasion, said that he was grateful for the opportunity of associating himself with the good work of the hospital which rendered much support to the medical officers of the corporation. The building occupies a site at the corner of Rodney-street and Mount Pleasant, and has the advantage of possessing a walled garden on the south side. It will accommodate 30 patients, in addition to nurses and servants. The principal entrance is from Mount Pleasant. On the first floor are two large wards to contain ten beds each, with a cubical area of 1500 feet per bed. Each ward is provided with a large open balcony. The dining room is on the ground floor, the men's day-room being on one side and the women's day-room on the other side of it; all open into covered verandahs overlooking the garden to the south. Everything has been done to render the hospital up to date. Externally the new buildings are of the Georgian style, of salmon terra-cotta and red Ruabon bricks, with a roof of green slates surmounted by a pleasing ventilating cupola.

University of Liverpool: Changes in the Faculty of Medicine during 1904.

The Vice-Chancellor has issued his first annual report on the work of the various faculties of the University. The Faculty of Medicine has been increased, partly by the establishment of new posts and partly by the addition of new members drawn from the staffs of the large general hospitals of the city, bringing with them the benevolent influence of those institutions in favour of the school, and arrangements have been completed whereby these institutions may undertake clinical teaching for the University degrees in medicine. Lectureships have been established and appointments have been made in dermatology, laryngology, clinical pathology, and neuro-pathology. A clinical lecturer in medicine and a clinical lecturer in surgery have been added to the faculty from the staffs of the Royal Southern, David Lewis Northern, and Stanley Hospitals respectively and two clinical lecturers in dental surgery from the staff of the Dental Hospital. Mr. W. Thelwall Thomas, in recognition of his long services to the school and in the teaching of surgery, has been made a member of the faculty under Statute 17. Dr. A. S. F. Grünbaum has resigned the lectureship in experimental medicine and the post of director of cancer research on his appointment to the chair of pathology in the University of Leeds. Professor F. T. Paul resigned the lectureship in dental anatomy, physiology, and histology and was succeeded by Mr. J. A. Woods. Dr. T. R. Bradshaw has received the distinctions of admission to the Fellowship of the Royal College of Physicians of London and of appointment as examiner in medicine to the University of London. Professor A. M. Paterson has been appointed Hunterian Professor by the Royal College of Surgeons of England. The first University examinations in medicine were held in March last. During the year the University has established diplomas in public health, tropical medicine, and veterinary hygiene, and the first examinations for these diplomas have been held. Dr. G. G. Stopford Taylor has endowed a Fellowship of £100 a year for a period of three years for the encouragement of research in dermatological pathology and a similar endowment has been made by Mr. Thelwall Thomas for the encouragement of research in surgical pathology. Dr. W. Alexander has undertaken to continue for the coming year the Fellowship that bears his name. The council of the University has agreed to take over the financial administration of the faculty as from Oct. 1st, 1904. For many years the faculty has maintained its financial independence but with the establishment of the University it was felt that the time had come to place the medical faculty on the same footing as other faculties.

Death of Dr. Edward Adam, formerly of Shaw-street.

Dr. Edward Adam died very suddenly on Dec. 19th at the age of 68 years. Dr. Adam received his medical education in Dublin and obtained the Membership of the Royal College of Surgeons of England in 1857. In 1886 he graduated as M.D. at the University of St. Andrews. He had recently retired from an extensive general practice and was held in great esteem by his brother practitioners for his sterling honesty and uprightness. Owing to his knowledge of tropical diseases, gained by some years' residence on the west coast of Africa, he was elected one of the representatives of the Liverpool School of Tropical Medicine at the African section of the Liverpool Chamber of Commerce. He was a former Vice-President of the Liverpool Medical Institution and was the first chairman of the Liverpool Medical Club. His funeral took place on Dec. 22nd at Anfield Cemetery and was very largely attended by a thoroughly representative gathering.

Dec. 27th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Monmouthshire Health Report.

THE sanitary committee of the Monmouthshire county council issues every year a review of the sanitary condition of the county, founded mainly upon the reports of the medical officers of health, together with comments on those reports. This committee includes among its members several county councillors who are also district medical officers of health; the report of the committee is thus of much less value than it would be if it were compiled by an

independent county medical officer of health. Why such a very necessary official has not yet been appointed by the Monmouth county council it is difficult to understand. The number of medical members of the council is unusually large and it might be expected that collectively they would be able to persuade their colleagues of the desirability for making such an appointment. If any county councillor had previously any doubt as to there being sufficient work in the county for a medical officer of health that doubt must surely have been removed after reading the last annual review of the sanitary committee. In one urban district—Ebbw Vale—with a population of 23,000 the death-rate from all causes in 1903 was 18·5 per 1000 and in 1902 it was 18·6 per 1000, in Blaenavon urban district with a population of 10,000 the 1903 death-rate was 19·1 per 1000 and that for 1902 was 20·5 per 1000, and Rhymney urban district with a population of 8000 had a death-rate in 1903 of 20·4 per 1000 and in 1902 of 21·5 per 1000. The zymotic death-rate in these three towns in 1903 was 3·4, 2·4, and 3·4 per 1000 respectively, while in 1902 it was 3·4, 5·2, and 4·3 per 1000. The principal cause of this excessive mortality from preventable diseases appears in the opinion of the sanitary committee to be defective drainage. It states, for example, that most of the 33 cases of diphtheria which occurred during the year in the town of Abergavenny were due to drain defects and that in Llanfrechfa Upper the fact that there were no cases of typhoid fever or diphtheria and only six cases of scarlet fever and one of erysipelas shows that the drainage of the district is, on the whole, good, though in the report for 1902 the drainage of the same district is described as "most unsatisfactory" and many houses were said to be without drains at all. In eight of the 25 sanitary districts in the administrative county the housing conditions are reported as satisfactory or sufficient, while in ten districts they are insufficient or deficient. There appear to be no refuse destructor and only one steam disinfector in the county and in only ten districts is there any isolation hospital accommodation.

Bristol Royal Infirmary.

The managers of the Bristol Royal Infirmary find themselves at the end of the year with a deficiency of over £5000 on the year's working. In order to increase the opportunities for giving small sums to the institution Mr. Samuel White, the managing director of the Bristol Tramways Company, is placing a collecting box upon every tramcar in the city, together with a notice calling attention to the needs of the infirmary and pointing out that if only 1s. a day is collected in each car the amount of the yearly deficit will be realised. It is said that if only 2 per cent. of the passengers drop a penny in the box the amount required will be obtained.

Cardiff Infirmary.

Sir William Thomas Lewis, who has for many years acted as agent to the Bute estates in Wales, has given £1000 for the endowment of a bed in the women's ward of the Cardiff Infirmary in commemoration of the completion of his 50 years' work in Cardiff.

Royal Cornwall Infirmary, Truro.

At a meeting held at the infirmary on Dec. 19th the Hon. John Boscawen stated that he had received £939 towards his appeal for £1000 towards providing the institution with a new laundry, a lift, and some other small improvements. The Prince of Wales has sent a donation and it is hoped that the sum required will be raised by the end of January.

Dec. 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Health Report of Glasgow for 1903.

Dr. A. K. Chalmers, medical officer of health of the city of Glasgow, has issued his annual report for 1903. It shows that the Registrar-General has estimated the population of Glasgow at the middle of 1903 at 786,897. This is based on the rate of increase during the intercensal period 1891–1901, but it exceeds by 4787 the estimate based on the return of inhabited houses, which amounts to 782,110. This shows an increase of 5142, or 0·7 per cent. Compared with the annual rate of increase during the last decade and with the estimated increase of last year that for the present year shows a marked reduction. How far this may be regarded as suggesting a movement outwards of the population aided by increasing means of locomotion or as resulting from a lessening of the opportunities of employment is not apparent. In 1903 7201 marriages were registered in Glasgow, as compared with 7304 in 1902. These represent rates per 1000 persons living of 9·2 and 9·38 respectively. The rate is lower than any which has been registered since 1895. The number of births during the year 1903 was 25,060, which represents a rate of 32·042 per 1000 living and may be compared with 24,708 births registered during 1902, representing a rate of 31·802. 15,073 deaths from all causes were registered in Glasgow during the year 1903, representing a death-rate of 19·2 per 1000 living on the Registrar-General's estimate of population, but only 14,483 of these deaths properly belong to Glasgow and in the medical officer's estimate of the population this represents a death-rate of 18·5 per 1000 living. The actual number of deaths registered is less than in any year since 1896, although the population exceeds the estimate for that year by 81,000. The rate is lower by 851 per 1,000,000 than in 1902 and lower than any hitherto recorded. In this connexion it is noted that enteric fever, measles, whooping-cough, and diarrhœa take no part in the reduction of the death-rate. In these diseases there is a slight increase. The information given under the heading of infantile mortality constitutes a most valuable part of the report. 3563 deaths of infants under one year occurred, which represent a death-rate per 1000 born of 142, as compared with 128 in 1902. Of these deaths 3116 were of legitimate and 447 of illegitimate children, representing rates of 132 and 298 respectively per 1000 births of each class. Dr. Chalmers in his previous report pointed to the unequal distribution of these deaths throughout the several months of the first year of life with the purpose of inquiring what proportion of them might reasonably be regarded as preventable by our present knowledge and methods of hygiene. It was shown that one-third of them occurred during the first four weeks immediately following birth—at an age, therefore, which suggested the operation of antenatal causes tending to unfit the child for independent existence—and that one-half of the total deaths occurred during the first three months of life. The inquiry has been pursued still further as to the distribution of the various causes of death throughout the several months of the first year and it is found that some of these are "constant" in their operation and by reason of their volume obscure to a considerable extent the reduction which has taken place in the other forms of fatal disease among children under one year. Tables and figures are given to show that the death-rate during the early months of infant life depends largely on diseases of immaturity, including premature birth, congenital malformations, atelectasis, atrophy, and debility, and that the death-rate is thereby maintained at a high constant level, while the death-rate of the succeeding months shows a steady decline. A particular instance is given: in 1871–72 the death-rate for the first three months of infant life was 71·6 per 1000 births, while in 1902–03 the death-rate for the same months was 67 per 1000. Contrasted with this the deaths between six and 12 months in the first period formed 71 per 1000 births and in the latter only 43. These last two figures represent an unusually high and an unusually low death-rate for which there are special reasons but there is, nevertheless, reasonable ground for regarding the causes of death in the later months of infant life at least as being amenable to those very measures which tend to reduce death-rates generally. Improved sanitation is saving many infant lives from those diseases which are common to children and adults, but the causes grouped under "immaturity" are outside this class and account for fully 30 per cent. of the deaths of infants. It is here that present methods of sanitation are failing and probably must of necessity fail except in so far as they influence the child through improvement in the health of the mother. The number of deaths arising from the principal zymotic diseases—small-pox, diphtheria, scarlet fever, typhus fever, enteric fever and undefined fever, measles, whooping-cough, and diarrhœa—in 1903 was 1960, representing an annual death-rate of 2·507 per 1000 living, as compared with 2·072 in 1902. It is satisfactory to note the distinct reduction that is going on in the death-rate from pulmonary tuberculosis. The following figures give the death-rate per 1,000,000 in the several quinquennia beginning with the year 1880, the last figure being for the three years 1900–02:—3140, 2601, 2315, 2014, and 1761.

Dec. 27th.

IRELAND

(FROM OUR OWN CORRESPONDENTS)

University of Dublin

A MEETING of the Senate of the University of Dublin was held on Dec 20th for the purpose of conferring honorary degrees The University Caput consisted of the Earl of Rosse, K P, Dr Anthony Traill, Provost, and Mr Cathcart senior master non regent Sir Frederick Treves received the honorary degrees of M Ch and M D The honorary degree of D Sc was conferred on Major Ronald Ross

Report of the Local Government Board

The annual report of the Local Government Board which has appeared recently (Dec 22nd) deals with a wide range of subjects and fills a volume of 500 pages As regards public health it is satisfactory to note that the prevalence of almost all specific fevers has been on the decline in Ireland Since 1865 there has been a continuous decline, so that in less than half a century the number of cases reported has decreased by a total of close upon 25,000 per annum a fact for which the lessening of the population cannot fully account Scarlet fever is an exception and has rather increased but the cases of it in the whole amount only to 1443 In reference to small pox the report is interesting, for it demonstrates the effect of an epidemic in conferring immunity and its indirect influence in causing preventive vaccination to be performed more largely In 1864 there were 1965 cases which, after three years, dropped to 105—that number remaining more or less stationary until 1871 The disease then again visited our shores There were 773 cases in that year rising in the next (1872) to no less than 10 317 That widespread epidemic roused the authorities and frightened the peasants, so that there has since been a decline in the number of cases of small pox in Ireland

The Value of a Workman's Eye

An interesting case under the Workmen's Compensation Act came before the Recorder of Belfast on Dec 19th in which a point which has not been previously determined in this country—namely, the value of a workman's eye—was raised The applicant who was a fitter in the employment of the Midland Railway Company
a piece of steel which flew off a
a result the eye had to be remo
on March 17th and on Sept 28th the company stopped the payment of half the man's wages on the ground that his in capacity for work had ceased Dr W M Killen (of the Benn Lye, Ear and Throat Hospital) said that the loss of one eye was calculated to reduce the area of vision and to affect judgment as to distances, in his opinion the man's wage earning capacity had v one third as a result of the Walton Browne (of the Belfast at he would not care to make a calculation as to how much the accident had reduced the applicant's wage earning capacity Dr Henry O Neill, one of the applicant's counsel stated that in France the law estimates that the loss of an eye reduces the wage earning capacity by one third The Recorder without deciding the point allowed the applicant half wages to the present time, stopping payment to enable him to get employment, without prejudice to an application for a further order, and he added that any subsequent order would depend on the wages which the man might be able to earn

The Newry Fever Hospital

As a result of the recent bazaar which was held on behalf of the Newry Fever Hospital and was opened on Dec 9th by the Lord Lieutenant of Ireland and the Countess of Dudley, a sum of £1314 11s 4d has been realised The amount expended on improvements to the hospital was £1500 so that when the expenses are deducted a small debt which it is hoped will at once be wiped out will still remain

The Sewerage of the Sydenham District of Belfast

At a meeting of the city corporation of Belfast held on Dec 21st it was decided to appropriate not more than five acres of Victoria Park for sewage purification works in connexion with the proposed Sydenham district drainage It appears that no other suitable ground could be obtained for making bacteria beds

Infectious Disease in Belfast

At the present time there is a great deal of scarlet fever of a mild type and German measles in Belfast and despite the efforts of the public health authorities the small pox epidemic is still widespread and the special hospital at Purdysburn for cases of this disease is almost filled

The Congestion in the Belfast Workhouse

Owing to the great congestion of the infirm classes, especially the male, in the Belfast workhouse (there being 700 men in wards suitable for the accommodation of half that number) the guardians some time since decided to take the buildings of the old Royal Victoria Hospital for use as an annexe to the workhouse but on Dec 20th they, for no apparent reason rescinded their former resolution It is thought probable that the Local Government Board will interfere, as the rule as to accommodation which it specifies as being necessary for health is being broken

The Christmas Holidays

College and hospital work ceased on Dec 21st and will recommence on Jan 4th At all the hospitals special measures were taken to entertain the patients and to make the Christmas time as pleasant and as enjoyable as possible

Dec 27th

PARIS

(FROM OUR OWN CORRESPONDENT)

The Workmen's Compensation Act

I HAVE frequently referred to the Workmen's Compensation Act as being one of great interest to medical men in so far as their fees are concerned The Senate has recently decided upon a part at least of the matters in question Here is the resolution —

The contractor (*chef d'entreprise*) is solely responsible in every case in addition to the obligations laid down in Article 3 for the hospital e of the sums named in the of July 15th 1893 increased francs per diem for Paris or

It follows that although this new law takes care to avoid branding the workman as a pauper by increasing by 50 per cent the al expenses by the prefects o medical attendance service, it from claiming fees for operations performed in cases where a workman has sustained injury in the course of his employment Despite an earnest plea put forward by a senator for the Haute Saone the Government agreed with the committee in rejecting an amendment to leave out the words 'all told' (*tout compris*) and the Senate rejected it by 216 votes to 39

The Toxicity of Naphthol Camphor

At the meeting of the Society of Surgery held on Dec 14th M Guinard discussed the conclusions arrived at in a communication submitted by M Calot in which the latter defended the use of injections of naphthol camphor for the treatment of certain localised tuberculous lesions M Calot argued that these injections, if made with the numerous and minute precautions which he laid down were in no way dangerous and he further stated that in 10,000 injections which he had given during the last few years he had never seen any grave sequel to occur Further, he stated that naphthol camphor cannot be replaced by any other agent for the purpose of a 'modifying injection (*injection modificatrice*) for it alone was capable of bringing about the perfect liquefaction of the tuberculous tissue and consequently its complete and easy removal from the organism M Guinard declared that he was neither convinced by the arguments nor by the figures of M Calot, he was certain that injections of naphthol camphor were dangerous and already 12 deaths had been reported after its use Its risk was in no way compensated by a superior therapeutic value and a solution of iodoform in ether was preferable

Sterilised Milk

Although the use of sterilised milk as an article of food for children has been the subject of innumerable protests on the grounds of its being neither nourishing nor digestible M Variot does not agree with these protests M Variot who is physician to the Hospital for Sick Children read a paper at the meeting of the Academy of Sciences held on Dec 5th in

favour of the use of sterilised milk, founding his arguments upon a lengthy trial of this substance as a food. During some 12 years he has distributed to 3000 infants 400,000 litres of milk sterilised at a temperature of 108° C. Sterilised milk is also distributed in the various dispensaries which exist in populous quarters. The good results obtained, which were made known to the Academy by M. Armand Gautier, show that milk sterilised in the above manner does not lose its nutritive value and that consequently it keeps its lecithins, its sodium citrate, and its lactose and that this last substance is not caramelised as was formerly wrongly held to be the case.

Microgastry.

At the meeting of the Academy of Medicine held on Dec. 20th M. Bendersky communicated the results of some researches which he had made into the condition of primary (*primitive*) microgastry—i.e., abnormal deficiency in the size of the stomach. By means of auscultatory percussion M. Bendersky had recognised the existence of stomachs the lower border of which was at a distance of six, eight, or even ten centimetres above the umbilicus. The cases were mostly of women. The diminution in the capacity of the stomach results in its being impossible for that viscus to contain the normal quantity of food, with the further consequence that vomiting is frequent but is not accompanied with preliminary nausea. The vomiting may, in fact, be called automatic and the patient feels none the worse for it. In some cases vomiting occurs ten times per diem and a very rebellious hiccough is often associated with the condition. M. Bendersky proposed as the best treatment that the meals should be very small but given at frequent intervals. He was further in the habit of washing out the stomach with small quantities of warm water in order to lessen its hyperexcitability.

Dec. 27th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Toronto Convalescent Home.

THE seventeenth annual report of the Hillcrest Convalescent Home of Toronto, embracing the work done at that institution from Oct. 1st, 1903, to Sept. 30th, 1904, has just been issued and it shows that patients to the number of 252 have been cared for during the past official year. There were no deaths and 17 patients remained in the home on Sept. 30th, 1904.

Medical Examining Board of British Columbia.

The Examining Board of the College of Physicians and Surgeons of British Columbia held its annual examinations last month, when of the 13 candidates who presented themselves nine were successful in obtaining first-class honours. The board consists of the following practitioners: Dr. C. J. Fagan, Victoria; Dr. W. J. McGuigan, Vancouver; Mr. R. E. Walker, New Westminster; Dr. A. P. Procter, Kamloops; Dr. J. M. Lefevre, Vancouver; Mr. J. C. Davie, Victoria; and Mr. O. M. Jones, Victoria.

Montreal General Hospital.

According to the report of the medical superintendent of the Montreal General Hospital for the three months ending Sept. 30th, there were treated in the institution during that time 829 patients. There were 57 deaths, 21 of which occurred within three days of admission, thus making the mortality rate for ordinary hospital cases 4·3 per cent. In the outdoor departments there were 10,235 consultations, as compared with 9692 for the corresponding period of 1903. The ambulance responded to 375 calls. The treasurer's receipts for the quarter were $14,918 and the expenses were $24,888.

Central Hospitals for Consumptives in Ontario.

A few years ago the legislature of the province of Ontario enacted measures providing for the granting of financial assistance to municipalities or groups of municipalities which would undertake to erect and to maintain sanatoriums for consumptives. Recently five municipalities, through their representatives, met in conference at a central point in Western Ontario for the above-named purpose. This is the initial step in establishing municipal sanatoriums in Ontario and will no doubt be followed by groups of other municipalities throughout Ontario.

The Inebriate Reform Society of Ontario.

Some weeks ago the Inebriate Reform Society of Ontario was organised in Toronto with the following objects: the promotion of the adoption of the probation system for the reformation of inebriates; promoting the adoption of the "home" or dispensary treatment of suitable cases; promoting the establishment of municipal sanatoriums for indigent inebriates; urging the necessary permissive legislation, similar in character to that of the Imperial Inebriates Act of 1898; and distributing inebriate reform literature. Amongst Toronto medical men taking a prominent part in this movement are Dr. A. M. Rosebrugh, who will act as secretary of the new organisation; Dr. Walter B. Geikie, late dean of Trinity Medical College; Dr. Alexander McPhedran, professor of medicine in the University of Toronto; Dr. R. W. Bruce Smith, the newly appointed inspector of prisons and public charities; Dr. William Oldright, professor of hygiene in the University of Toronto; and Dr. E. J. Barrick, a well-known advocate of the establishment of municipal sanatoriums for patients of the poorer class suffering from tuberculosis.

Toronto, Dec. 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Prevention of Tuberculosis.

A BRANCH of the British Association for the Prevention of Consumption has been formed in New South Wales and held its first meeting recently at the Sydney town-hall. Dr. P. Sydney Jones presided and explained that the branch was affiliated with the parent body in England and the meeting was to determine how best to attain the objects of the association. After discussion it was resolved that the objects of the association should be carried out by the following means:—

The education of public opinion and stimulation of individual initiative by means of the circulation of pamphlets and leaflets setting forth in plain language the results of scientific investigation on the mode of the diffusion of tubercular disease and proper measures to be taken for its prevention. Public lectures by persons approved of by the council of this branch, addresses at congresses and other public gatherings. Cooperation with other societies or bodies having for their object the promotion of public health. The coöperation of the public press. The promotion of the establishment of open-air sanatoria and special hospitals for tubercular patients. The influencing of Parliamentary, municipal, and other public authorities on matters relating to the prevention of tuberculosis. The establishment throughout the State of sub-branches.

The Sydney city council has adopted by-laws for the compulsory notification of pulmonary consumption. Dr. Camac Wilkinson, who is one of the city aldermen, strongly opposed the by-laws on the grounds that as isolation of consumptives and adequate disinfection were impracticable, notification *per se* would do no good. The New South Wales branch of the British Medical Association held a special meeting and passed the following motions:—

1. That in the opinion of this meeting compulsory notification of pulmonary tuberculosis is essential to the successful conduct of the fight against tuberculosis. That the New South Wales branch of the British Medical Association hereby accords its hearty support to the new by-laws proposed by the health committee of the city council.
2. That the resolution be communicated to the Lord Mayor and the city council.

These resolutions were considered by the Board of Health and the Board agreed:—

1. That legislation ought to be introduced to carry into effect the compulsory notification of phthisis with suitable limitations. 2. That hospital accommodation should be provided, and should be thrown open to all those consumptives whose domestic duties are such that they could not but continue to be a danger to their housemates 3. That a copy of this resolution be forwarded to the Premier.

On Oct. 17th a meeting was held at the town-hall, Sydney, to promote the establishment of a city dispensary for consumption. Dr. Wilkinson moved that the meeting approved of such a proposal and the motion was ultimately carried. Dr. Wilkinson explained that the idea had met with the unanimous support of the city council but legal difficulties prevented its using funds for the purpose. A Bill had been prepared to give the necessary power but it would take time before it could be passed. Meanwhile those who recognised the value of such a means of combating consumption could carry it out by voluntary subscriptions and subsequently the city council could take the dispensary over. The total cost was estimated at £500 a year. The objects of the proposed institution were:—

The treatment of the consumptive, by which the sources of infection are automatically discovered; instruction of the patient and his immediate relatives as to the nature and origin of consumption and the best

means of avoiding and preventing infection the services of a trained nurse to attend in their own homes those who cannot be taken to a sanatorium or hospital Inspection of the home and disinfection of the rooms supply of all medicines food and all other necessaries for invalids and examination of the other members of the family for evidence of fresh infection

Sir James Graham and other me
the value of such an institution
organizations and considered that
established in connexion with the Queen Victoria Consumptive Homes or by the Society for the Prevention of Tuberculosis At a recent meeting the Western Suburbs Medical Association, Sydney, carried the following motion —

That in the opinion of its members it is desirable that all cases of pulmonary consumption should be notified to the Board of Health

On Oct 14th the New South Wales branch of the British Medical Association also adopted the following motions —

"That the branch of the British
health to take steps to
nary tuberculosis
hospitals for advanced

The Melbourne city council is opposed to the proposal to erect a consumption hospital in the Royal Park and has resolved to form a deputation to the Premier to protest against the establishment of such an institution on the suggested site

Lunacy in New South Wales

The report of the inspector general of the insane of New South Wales (Dr Eric Sinclair) for 1903 states that on Dec 31st the number of insane persons under official cognisance was 4950, being an increase in the year of 263 The average annual increase for 20 years was 127, so that for 1903 was much above the average For several years attention had been called to the need of additional buildings for the accommodation of patients A fitting reference is made to the death of Dr F Norton Manning the late inspector general "The place his work for the department won for him is a lasting one and is not lowered by lapse of time The present state of efficiency of the hospitals and their high reputation throughout Australia are his best monument"

Infectious Disease in Victoria

The last fortnightly return of infectious disease submitted to the Board of Public Health in Victoria showed that there were 11 cases of typhoid fever, as against three cases and one death for the corresponding period of last year In the metropolitan area there were three cases—the same number as last year The cases of diphtheria numbered 103 and four deaths, as against 56 cases and four deaths last year In the metropolitan area there were 33 cases and two deaths, as compared with 24 cases and one death during the corresponding period of 1903 It was further reported that there were 40 cases of scarlet fever and one death, as against 44 cases and two deaths last year In the metropolitan area the numbers were 30 cases, as against 30 cases and one death in 1903 The chairman of the board, Dr D A Gresswell, stated that the condition of the State schools was largely responsible for the prevalence of diphtheria and other infectious disease in Victoria, as they were not properly ventilated and were over crowded

Food Adulteration in Victoria

The Government analyst of Victoria has made a report regarding the adulteration of food in the State Samples of cordial were collected from all the leading towns in the State and the results of examination were —

	Number of samples	Number adulterated
Ginger	11	10
Cloves	11	11
Peppermint	23	21
Lime juice	35	33
Lemon syrup and squash	8	7
Sarsaparilla	21	19
Hop bitters	9	7
Raspberry (previously reported upon)	44	43
Totals	162	151

The forms of adulteration detected were the addition of chemical preservatives, artificial sweetening (saccharine), coal tar dyes and cochineal, bleaching agents (sulphurous acid), artificial aromas, and alum Many of the samples of raspberry and lime juice were found to be of entirely fictitious origin The chemical preservatives were salicylic acid, sulphurous acid, and compounds of sulphurous acid Attention was then directed to sausages Of 25 samples of prepared sausages 17 were adulterated with chemical preservatives Of 68 samples of fresh sausages not one was unadulterated In the prepared sausages boric acid and its compounds were found and in fresh sausages sulphite and bisulphite of sodium as well There were also found boric acid and its compounds in biscuits and yellow dyes in place of eggs for imparting a false appearance of richness to pastry, salad oil in some cases consisted principally of mineral oil of petroleum origin and in others was largely adulterated with peanut oil, preserved egg yelks and albumins contained large quantities of boric acid and its compounds, and coffee consisted principally of wasted grain Nov 15th

Obituary.

ARTHUR QUARRY SILCOCK, M D, B S LOND, F R C S ENG,

SURGEON AND JOINT LECTURER ON SURGERY TO ST MARY'S HOSPITAL AND SURGEON TO THE ROYAL LONDON OPHTHALMIC HOSPITAL.

THE medical profession, especially the medical school of St Mary's Hospital, has suffered a serious loss in the early death of Mr Arthur Quarry Silcock, surgeon and joint lecturer on surgery to the hospital and surgeon to the Royal London Ophthalmic Hospital Mr Silcock, as we have already stated, died from an acute attack of appendicitis which an operation failed to arrest

Arthur Quarry Silcock was born at Chippenham, Wiltshire, in 1855, his father who was an engineer, dying while he was still a child His mother, after a short residence in Bath, went to London with her son who was her only child, and, in due course after a private education, he proceeded to University College, London His devotion to his mother was quite a distinguishing feature in Silcock's quiet studious life, and his mother, who died only recently, lived to see her son a distinguished man His professional career at the hospital was a highly successful one He qualified as a Bachelor of Surgery at the University of London and Fellow of the Royal College of Surgeons of England, taking also his Doctorate of Medicine and was appointed house surgeon at University College Hospital, afterwards holding all the junior posts He was also senior demonstrator of anatomy and demonstrator of practical surgery In 1884, foreseeing that his appointment as surgeon upon the staff of University College Hospital would be inevitably delayed he accepted the invitation of St Mary's Hospital to become pathologist, afterwards being elected assistant surgeon At St Mary's Hospital his strong personality industry and deep surgical knowledge made him one of the strongest members of the staff He was full of energy and alert to the extent that superficially his manner might suggest restlessness, but those who attended his clinical demonstrations knew how genuine was his yearning for a deeper insight into the processes of disease and how thoroughly critical was the attitude that he could impose upon himself No one who sought his aid could fail to realise that all his powers were unreservedly at their service both as a surgeon and as a teacher and it was clear that his judgment and discrimination were also working in accordance with the ordered plan of a man who knew his subjects Whether in general surgery or in ophthalmic surgery or as a teacher, his accurate knowledge of pathology, to which in his early years he had devoted so much time, enabled him to justify a diagnosis or to explain a physical sign when his accuracy had appeared to depend upon empiricism This knowledge of pathology gave an impressive solidity to his judgment so that his opinion carried with it a conviction that no mere surface view of the problem would satisfy him but that he must penetrate to the real meaning of things The conviction was a sound one and thus thoroughness made Silcock very valuable in consultation both to the patient and the practitioner and accounted for the high position that he always took in the opinion of his house surgeons

As a colleague Mr Silcock was distinguished by his simple uprightness, a frank directness of utterance and real generosity of view concealed under a somewhat brusque

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £80 per annum, rising to £100, with board, washing, and lodging.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board, washing, &c.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Senior House Surgeon, also Junior House Surgeon, both unmarried. Salary of the former £120 and of the latter £80 per annum, with board, lodging, and washing.

DERBYSHIRE ROYAL INFIRMARY.—House Surgeon No. 2 and House Physician for 12 months. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Dental Surgeon.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn-circus, E.C.—Honorary Dental Surgeon.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, W.C.—Assistant Resident Medical Officer, unmarried. Honorarium £40, with full board.

GLOUCESTER GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £30 per annum, with board, residence, and washing.

GROCERS' COMPANY'S SCHOLARSHIPS.—Two Scholarships for Sanitary Science, value £300 a year, with allowance, tenable for two years.

LANCASTER, COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, with board, lodging, washing, &c.

LINCOLN, THE LAWN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary £100.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, London, E.—Teachers of Protozoology and Teachers of Helminthology. Salary £250, rising to £500 per annum, with luncheon and tea.

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Physiology. Salary £600, with half of class fees.

NORFOLK AND NORWICH HOSPITAL.—Assistant House Surgeon for six months. Honorarium £20, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal-green, E.—House Surgeon for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

ROYAL DENTAL HOSPITAL OF LONDON.—Demonstrator in Mechanical Pupils' Department. Stipend £120, rising to £150 per annum.

ST. MARY'S HOSPITAL, Paddington, W.—Two Physicians in charge of Out-patients.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

SCARBOROUGH, BOROUGH OF.—Medical Officer of Health. Salary £350 per annum, rising to £400.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Honorary Assistant Physician.

VENTNOR, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Resident Medical Officers, unmarried. Salary £80 per annum, with board and lodging.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer, unmarried. Salary £150 per annum, with prospect of increase to £350, with apartments, board, attendance, and washing.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Honorary Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

PAYNE.—On Dec. 23rd, at Holmwood, Vesta-road, Brockley, S.E., the wife of William Henry Payne, M.R.C.S., L.R.C.P. Lond., of a daughter.

STEEN.—On Dec. 22nd, at The Drive, Cranbrook-park, Ilford, the wife of James Ross Steen, M.D., of a daughter.

MARRIAGES.

HENDERSON—JONES.—At Berea Chapel, Criccieth, N. Wales, on Dec. 28th, Robert G. Henderson, M.B., M.A., F.R.C.S., of Oldham, to Lizzie Jane, elder daughter of the late Captain Robert Jones and Mrs. Jones, Arfor Villa, Criccieth.

POYNTON—CAMPBELL-ORDE.—On Dec. 20th, at St. John's Church, Paddington, by the Rev. A. Simeon, rector of Yattendon, assisted by the Rev. G. S. Karney, incumbent of St. John's, Frederic J. Poynton, M.D., F.R.C.P. Lond., son of the late Rev. Francis John Poynton, rector of Kelston, Bath, to Alice Constance, daughter of the late Sir John Campbell-Orde, Bart., of Kilmory, Argyllshire.

DEATHS.

COPLEY.—On Dec. 26th, at Mounpesson House, Wisbech, Cambs., William Henry Copley, M.R.C.S., L.R.C.P., aged 49 years.

MATHESON.—On Dec. 25th, at Moulton, Northants, John Colin Matheson, M.B., C.M. Glasg., aged 34 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answ to Correspondents.

HARD WORDS AGAINST MEDICAL MEN.

AN inquest was held on Dec. 15th at Wigan as to the death of a wo from the effect of burns. A witness stated that he was in bed heard a woman scream, "Oh, my child! Will no one come and my child? It is on fire." He rushed into the street and saw a wo in flames with a child in her arms. "The husband was lea against the door and made no attempt to help." The wife tu round and said to her husband, "It's thee that's done it," to w he replied, "Well, tha should use less lip." This scene may serv illustrate one type of Lancashire civilisation after 30 years' dili carrying out of our methods of education. There was contradic evidence as to whether the husband had thrown the lamp at wife or whether the occurrence was accidental. The husband he went to several medical men and that they all refused to c "The chief constable: For the sake of half-a-crown they would woman burn. It is a scandal to the medical profession." The returned a verdict of "Accidental death," and added "that considered it a scandal to the medical profession of Hin that the woman was not attended to." Before judging medical profession of Hindley, it might have been better if coroner and the jury had taken a little more trouble to ascer the facts. The statement appears to rest on the testimony Brown who does not seem a very creditable or credible witness. man stated in evidence that the husband told him he had thro lamp at his wife because she was grumbling. This the husb denied but it is clear that his statements want corroboration and not easy to understand the readiness of the chief constable and jury to throw stones at the local members of the profession w they pass over the conduct of the husband who at the best can scar be held up as a model husband and father.

ANTI-RHEU-GEM QUACKERY.

IN reference to our remarks about the above-mentioned quack appar in our issue of Dec. 17th we have received the following letter f Dr. H. McCloghey:—

Colonsay, Argyll, N.B., Dec. 23rd, 19

SIRS,—I wish to rectify a mistake which occurred in your issu the 17th inst. In that number it is stated that I intimated it w please me to recommend Anti-Rheu jewellery. This is incor as I have no experience whatsoever of the merits or demeri that cure.

H. MCCLOGHI

To the Editors of THE LANCET.

We are very glad to receive Dr. McCloghey's disclaimer but we before us page xi. of the advertisements in the Christmas numb *Cassell's Magazine* for 1904, in which a testimonial nomin given by Dr. McCloghey is printed bearing witness to the r which a patient of his derived from the "ring which she got f your firm." The testimonial ends with these words, "I wil very pleased to recommend it." We advise Dr. McCloghey to c municate with the Anti-Rheu-Gem Company, Birmingham, and the editor of *Cassell's Magazine* with a view to have the fraudu advertisement stopped.

A MATTER OF TASTE.

FROM an advertisement column in the *Morning Post* of Dec. 2 1904:—

DR. NITCH-SMITH wishes all his Frien and Patients a MERRY CHRISTMAS and a HAPPY N YEAR.

We do not commend this innovation.

THE TITLE OF GENTLEMAN.

THE recent ruling of a county-court judge in East Essex, that the purposes of the new rules relating to the rates of payment witnesses in criminal proceedings a schoolmaster without a versity training is not a "gentleman" within the meaning of th rules, is of historical interest to the members of the medical p fession. Formerly most medical practitioners were excluded fr that vague yet courteous category. In the days when the labour the profession had a threefold division it was only the physicia fortified by their university degrees, who were enumerated, in eye of the law, among "gentlemen." The apothecaries, hav merged from the Company of Spicers and Grocers, and surgeons, having evolved from mechanical artificers, either bart or blacksmiths, were both regarded as tradesmen, as ind they found to their cost when they became bankrupt. If landl as often they were, they ranked among the "inferior tradesme For example, in 1615, Francis Bacon, in Priest's case, classed barb surgeons with butchers as "base mechanical persons." There is this day a vulgar opinion that butchers are exempt from ji service. The tone of patronage used by Justice Noel, as recor 150 years later in Wilson's King's Bench Reports (vol. ii., p. 70 amusing to our modern ears; he said: "In my own opinion a surg is the fittest person in the world to be in the field with gentlen

shunting, for I remember the master of a pack of hounds had his neck dislocated by a fall from his horse when out shunting, and if a surgeon had not been near him when the accident happened, who pulled his neck right, the gentleman would most certainly have lost his life."

TUBERCULO-ALBIN.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me information concerning "tuberculo albin" prepared by Dr. Alfred Thamm, Berlin? It is claimed to be a serum obtained from tubercle bacilli and has evidently been used in Germany for the last two years. I should like to know if anyone has used it in this country and with what results.

I am, Sirs, yours faithfully,

G.P.

Reply.—Yes, we think so. But the work must be in every step under the supervision of the principal.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 29th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min Temp	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 23	30·31	S.	...	40	38	33	35	35	Foggy
24	30·20	N.E.	...	38	38	30	33	34	Overcast
25	30·03	E.	...	42	40	34	36	38	Overcast
26	29·96	E.	...	39	39	37	37	38	Raining
27	30·21	N.E.	...	43	43	37	38	39	Raining
28	30·37	S.W.	0·01	52	52	39	41	43	Raining
29	30·37	S.W.	0·04	72	56	42	51	52	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY ... (20, Hanover-square, W.) ...

WEDNESDAY ... (20, Hanover-square, W.) ... Dr. Lewers, Dr. Willoughby, and Dr. Taylor. Leicester: On a Case of Chyluria with Pregnancy. And one by Dr. A. W. W. Lea. Paper:—Dr. V. Bonney and Mr. A. G. R. Foulerton: The Etiology of Puerperal Fever.

...square, W.).— ... of an Automatic ...ork); (2) Exhibi... ...s of Aluminium ...uration of Glass

Hospital N.).— ...s of Alcoholism (opened by Dr. A. J. Whiting).

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1904, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

VOLUMES AND CASES

VOLUMES for the second half of the year 1904 will be ready shortly. Bound in cloth, gilt lettered, price 18s. carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

To be obtained on application to the Manager, accompanied by remittance.

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During the week marked copies of the following newspapers have been received:—*Poor Law and District Council Journal (Dublin), Dublin Times, Birmingham Post, Surrey Advertiser, Notts Guardian, Dublin Express, Local Government Chronicle, Mining Journal, The Scotsman, Evening News, Liverpool Mercury and Journal, Oban Times, Ilford Recorder, Daily News, Star, Warminster and Westbury Journal, Westminster Gazette, &c.*

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